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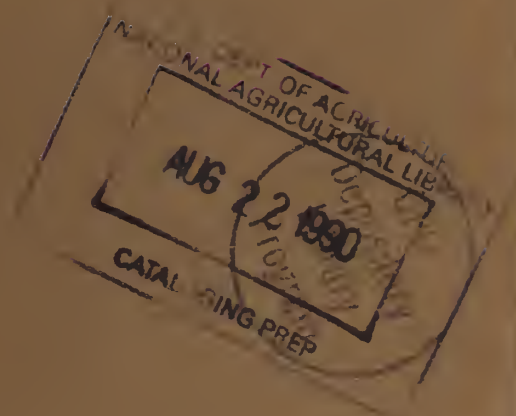


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# GOOD SOURCES OF NUTRIENTS

These 17 fact sheets can help you select foods that provide the vitamins, minerals, and dietary fiber you need every day as you follow the Dietary Guidelines for Americans. Each fact sheet explains the function of one nutrient, lists good sources of the nutrient, and gives tips on preparing and serving foods that are good sources.



## Fact sheets are included for –

- |                |              |
|----------------|--------------|
| • Vitamin A    | • Calcium    |
| • Vitamin E    | • Iron       |
| • Vitamin C    | • Magnesium  |
| • Vitamin B-6  | • Copper     |
| • Vitamin B-12 | • Zinc       |
| • Folate       | • Phosphorus |
| • Thiamin      | • Potassium  |
| • Riboflavin   | • Dietary    |
| • Niacin       | Fiber        |

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U.S. Department of Agriculture

Beltsville, Maryland 20705



## GOOD SOURCES OF NUTRIENTS

# VITAMIN A

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

### What Is Meant By a Good Food Source?

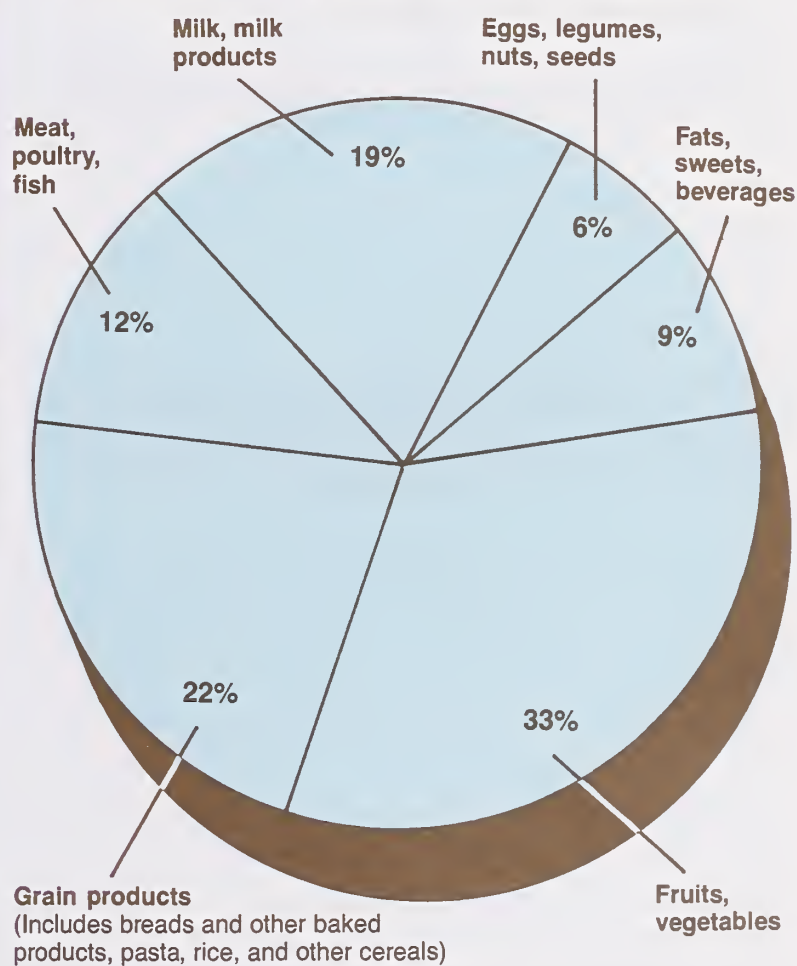
A good food source of vitamin A contains a substantial amount of vitamin A and/or carotenes (converted to vitamin A in the body) in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for vitamin A in a selected serving size or a unit of measure considered easy for the consumer to use. The U.S. RDA for vitamin A is 1,000 retinol equivalents per day.<sup>1</sup>

The U.S. RDA for vitamin A is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

RDA has been set at 800 retinol equivalents per day for women 19 to 50 years of age and 1,000 retinol equivalents for men 19 to 50 years of age.

### Where Do Women Get Vitamin A?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, 33 percent of the vitamin A (including carotenes) in the diets of women came from fruits and vegetables. Dark-green vegetables and deep-yellow fruits and vegetables provided about half of

the vitamin A in the form of carotenes coming from this group. Grain products and milk and milk products each supplied about 20 percent of the vitamin A consumed. Foods that contain small amounts of vitamin A but are not considered good sources can contribute significant amounts of vitamin A to an individual's diet if these foods are eaten often or in large amounts.

### **Why Do We Need Vitamin A?**

Vitamin A, a fat-soluble vitamin, is involved in the formation and maintenance of healthy skin, hair, and mucous membranes.

Vitamin A helps us to see in dim light and is necessary for proper bone growth, tooth development, and reproduction.

### **Do We Get Enough Vitamin A?**

According to recent USDA surveys, the average intake of vitamin A (and carotenes) by women and men 19 to 50 years of age met the RDA for vitamin A.

### **How Can We Get Enough Vitamin A?**

Eating a variety of foods that contain vitamin A (and carotenes) is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. In fact, too much vitamin A can be toxic. The list of foods will help you select those that are good sources of vitamin A as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

### **How To Prepare Foods To Retain Vitamin A**

Vitamin A can be lost from foods during preparation, cooking, or storage. To retain vitamin A:

- Serve fruits and vegetables raw whenever possible.
- Keep vegetables (except sweet potatoes and winter squash) and fruits covered and refrigerated during storage.
- Steam vegetables and braise, bake, or broil meats instead of frying. Some vitamin A is lost in the fat during frying.

### **What About Fortified Foods?**

Lowfat and skim milks are often fortified with vitamin A because it was removed from milk with the fat. Margarine is fortified to make its vitamin A content the same as butter.

Most ready-to-eat and instant-prepared cereals are fortified with vitamin A. Fortified ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for vitamin A. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

### **What Is a Serving?**

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of a nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of a cooked vegetable contains more vitamin A than 1/2 cup of the same vegetable served raw, because a serving of the cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Vitamin A?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS<sup>2</sup>

Oatmeal, instant, fortified, prepared.....	2/3 cup.....	+++
Ready-to-eat cereals, fortified.	1 ounce.....	++

## FRUITS

Apricot nectar.....	1/2 cup.....	+
Apricots:		
Canned, juice-pack.....	About 3 halves.....	+
Dried, cooked, unsweetened.....	1/2 cup.....	++
Dried, uncooked.....	About 9 halves.....	+
Cantaloup, raw.....	About 1/2 cup diced..	++
Mandarin orange sections, canned or frozen, juice-pack.....	1/2 cup.....	+
Mango, raw.....	1/2 medium.....	+++
Melon balls (cantaloup and honeydew), frozen, unsweetened.....	1/2 cup.....	+
Nectarine, raw.....	1 medium.....	+
Plums, canned, juice-pack...	1/2 cup.....	+
Watermelon, raw.....	About 1 3/4 cups diced.....	+

## VEGETABLES

Broccoli, cooked.....	1/2 cup.....	+
Carrots:		
Cooked.....	1/2 cup.....	+++
Raw.....	4 3-inch strips.....	+++
Chard, cooked.....	1/2 cup.....	+
Collards, cooked.....	1/2 cup.....	+
Endive, chicory, romaine, or escarole; raw.....	1 cup.....	+
Escarole, cooked.....	1/2 cup.....	+
Kale, cooked.....	1/2 cup.....	+++
Mustard greens, cooked.....	1/2 cup.....	+
Peas and carrots, cooked...	1/2 cup.....	+++
Pepper, sweet, red:		
Cooked.....	1/2 cup.....	++
Raw.....	1 small.....	+++

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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Plantain, green or ripe, boiled	1 medium.....	+
Pumpkin, cooked.....	1/2 cup.....	+
Spinach:		
Cooked.....	1/2 cup.....	+++
Raw.....	1 cup.....	+
Squash, winter, cooked, mashed.....	1/2 cup.....	+++
Sweetpotato:		
Baked or boiled.....	1 medium.....	+++
Canned.....	1/2 cup.....	+++
Tomatoes:		
Cooked.....	1/2 cup.....	+
Raw.....	1 medium.....	+
Tomato juice, canned.....	3/4 cup.....	+
Tomato-vegetable juice cocktail.....	3/4 cup.....	+
Turnip greens or turnip greens with turnips, cooked.....	1/2 cup.....	+++

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

Liver, braised:		
Beef, calf, or pork.....	3 ounces.....	+++
Chicken or turkey.....	1/2 cup diced.....	+++

### Fish and Seafood

Mackerel, canned, drained.	3 ounces.....	+
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## MILK, CHEESE, AND YOGURT

Milk, lowfat or skim.....	1 cup.....	+
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<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on fortified foods.



# VITAMIN E

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

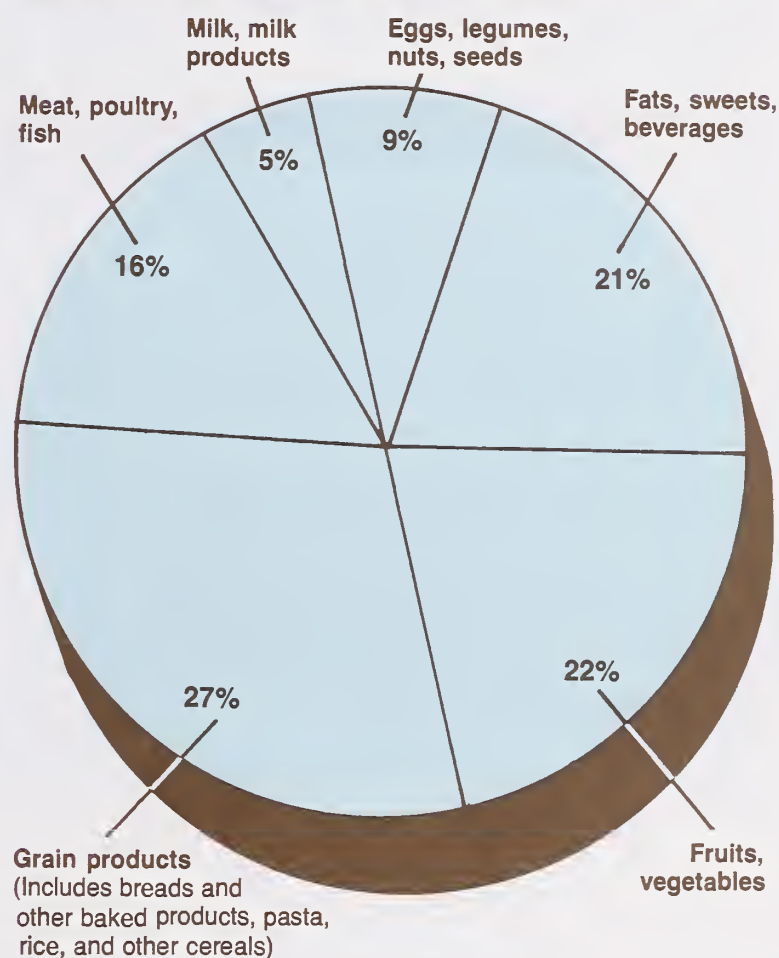
## What Is Meant By a Good Food Source?

A good food source of vitamin E contains a substantial amount of vitamin E in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for vitamin E in a selected serving size. The U.S. RDA for vitamin E is 10 milligrams per day.<sup>1</sup>

The U.S. RDA for vitamin E is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 8 milligrams per day for women 19 to 54 years of age and 10 milligrams for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Vitamin E?<sup>1</sup>



**Source:** U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, 27 percent of the vitamin E in the diets of women came from grain products and 22 percent came from fruits and vegetables. Foods that contain small amounts of vitamin E but are not considered good sources can contribute significant amounts of vitamin E to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Vitamin E?

Vitamin E, a fat-soluble vitamin, protects vitamin A and essential fatty acids from oxidation in the body cells and prevents breakdown of body tissues.

## Do We Get Enough Vitamin E?

According to recent USDA surveys, the intake of vitamin E by women 19 to 50 years of age averaged less than 90 percent of the RDA. Men of the same age had intakes close to 100 percent of the RDA.

## How Can We Get Enough Vitamin E?

Eating a variety of foods that contain vitamin E is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of vitamin E as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Vitamin E

Vitamin E can be lost from foods during cooking, processing, or storage. To retain vitamin E:

- Use whole-grain flours.
- Store foods in airtight containers and avoid exposing them to light.

## What About Fortified Foods?

Most ready-to-eat cereals are fortified with vitamin E. Fortified ready-to-eat cereals usually contain at least 40 percent of the U.S. RDA for vitamin E. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup canned fruit contains more vitamin E than 1/2 cup of the same fruit served raw, because a serving of the canned fruit weighs more. Therefore, the canned fruit may appear on the list while the raw form does not. The raw fruit provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Vitamin E?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
<b>BREAD, CEREALS, AND OTHER GRAIN PRODUCTS</b>		
Multigrain cereal, cooked . . .	2/3 cup . . . . .	+
Ready-to-eat cereals, fortified <sup>2</sup>	1 ounce . . . . .	+++
Wheat germ, plain . . . . .	2 tablespoons . . . . .	++

## FRUITS

Apple, baked, unsweetened . .	1 medium . . . . .	+
Apricots, canned, juice-pack .	1/2 cup . . . . .	+
Nectarine, raw . . . . .	1 medium . . . . .	+
Peaches, canned, juice-pack .	1/2 cup . . . . .	+

## VEGETABLES

Chard, cooked . . . . .	1/2 cup . . . . .	+
Dandelion greens, cooked . .	1/2 cup . . . . .	+
Kohlrabi, cooked . . . . .	1/2 cup . . . . .	+
Mustard greens, cooked . . .	1/2 cup . . . . .	+
Pumpkin, cooked . . . . .	1/2 cup . . . . .	+
Turnip greens, cooked . . . .	1/2 cup . . . . .	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

Liver, chicken, or turkey, braised . . . . .	1/2 cup diced . . . . .	+
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### Fish and Seafood

Clams; steamed, boiled, or canned; drained . . . . .	3 ounces . . . . .	+
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Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
Croaker, mackerel, mullet, or ocean perch; baked or broiled . . . . .	3 ounces . . . . .	+
Mackerel, canned, drained .	3 ounces . . . . .	+
Salmon: Baked, broiled, steamed, or poached . . . . .	3 ounces . . . . .	+
Canned, drained . . . . .	3 ounces . . . . .	+
Scallops, baked or broiled .	3 ounces . . . . .	+
Shrimp: Broiled, steamed or boiled . . . . .	3 ounces . . . . .	++
Canned, drained . . . . .	3 ounces . . . . .	+

## Nuts and Seeds

Almonds, unroasted . . . . .	2 tablespoons . . . . .	+++
Brazil nuts . . . . .	2 tablespoons . . . . .	+
Filberts (hazelnuts) . . . . .	2 tablespoons . . . . .	+++
Peanuts, roasted or dry-roasted . . . . .	2 tablespoons . . . . .	+
Peanut butter . . . . .	2 tablespoons . . . . .	++
Sunflower seeds, hulled, roasted or dry-roasted . . .	2 tablespoons . . . . .	+++

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on fortified foods.



# VITAMIN C

**(Ascorbic Acid)**

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

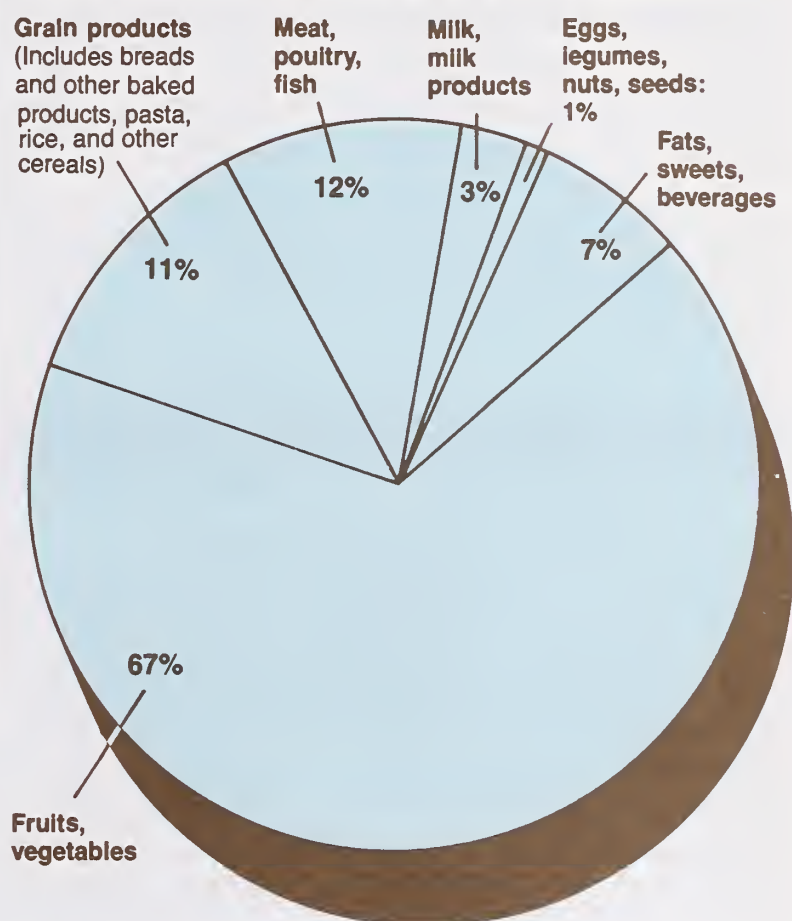
## What Is Meant By a Good Food Source?

A good food source of vitamin C contains a substantial amount of vitamin C in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for vitamin C in a selected serving size. The U.S. RDA for vitamin C is 60 milligrams per day.<sup>1</sup>

The U.S. RDA for vitamin C is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 60 milligrams per day for women and men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Vitamin C?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, 67 percent of the vitamin C in the diets of women came from fruits and vegetables. Citrus fruits and tomatoes contributed almost half of the vitamin C provided by the fruits and vegetables group. Almost all of the vitamin C supplied by the fats, sweets, and beverages group came from beverages. Foods that contain small amounts of vitamin C but are not considered good sources can contribute significant amounts of vitamin C to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Vitamin C?

Vitamin C, a water-soluble vitamin, is important in forming collagen, a protein that gives structure to bones, cartilage, muscle, and blood vessels. It also helps to maintain capillaries, bones, and teeth and aids in the absorption of iron.

## Do We Get Enough Vitamin C?

According to recent USDA surveys, average intake of vitamin C by women 19 to 50 years of age was over the RDA for vitamin C. Women tended to consume less than men of the same age. Most nutrition scientists believe that there are no known advantages in consuming excessive amounts of vitamin C.

## How Can We Get Enough Vitamin C?

Eating a variety of foods that contain vitamin C is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of vitamin C as you follow the Dietary Guidelines. The list of food sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Vitamin C

Vitamin C can be readily lost from foods during preparation, cooking, or storage. To retain vitamin C:

- Serve fruits and vegetables raw whenever possible.
- Steam, boil, or simmer foods in a minimal amount of water, or microwave them for the shortest time possible.
- Cook potatoes in their skins.
- Refrigerate prepared juices, and store them for no more than 2 to 3 days.
- Store cut raw fruits and vegetables in an airtight container and refrigerate—do not soak or store in water. Vitamin C will be dissolved in the water.

## What About Fortified Foods?

Some juices not normally a source of vitamin C, such as grape and apple, have vitamin C added. A 3/4-cup (juice glass) serving of these fortified juices may provide 40 percent or more of the U.S. RDA for vitamin C. Check the label for the exact amount. Vitamin C (ascorbic acid) is added to frozen peaches to prevent discoloration.

Most ready-to-eat cereals are fortified with vitamin C. Fortified ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for vitamin C. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of a cooked vegetable contains more vitamin C than 1/2 cup of the same vegetable served raw, because a serving of the cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Vitamin C?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

Ready-to-eat cereals, fortified<sup>2</sup> 1 ounce . . . . . + +

## FRUITS

### Apples:

Baked, unsweetened . . . . . 1 medium . . . . . +  
 Raw . . . . . 1 medium . . . . . +  
 Apple juice<sup>3</sup> . . . . . ¾ cup . . . . . + + +  
 Banana, raw . . . . . 1 medium . . . . . +  
 Blackberries, raw . . . . . ½ cup . . . . . + +  
 Blueberries, raw . . . . . ½ cup . . . . . +

### Cantaloup:

Frozen balls, unsweetened . ½ cup . . . . . + + +  
 Raw . . . . . About ½ cup diced . . . + + +  
 Cranberry juice cocktail<sup>3</sup> . . . 1 cup . . . . . + + +  
 Grapefruit, raw . . . . . ½ medium . . . . . + + +  
 Grapefruit juice; fresh,  
 canned, or reconstituted  
 frozen; unsweetened . . . . . ¾ cup . . . . . + + +

Grapefruit and orange  
 sections, canned,  
 unsweetened . . . . . ½ cup . . . . . + + +

Grapefruit and orange juice,  
 unsweetened . . . . . ¾ cup . . . . . + + +

Grape juice, unsweetened<sup>3</sup> . . . ¾ cup . . . . . + + +

Honeydew melon, raw . . . . . About ¾ cup diced . . . + + +

Kiwifruit, raw . . . . . 1 medium . . . . . + + +

Mandarin orange sections,  
 canned or frozen, juice-  
 pack . . . . . ½ cup . . . . . + + +

Mango, raw . . . . . ½ medium . . . . . + + +

Nectarine, raw . . . . . 1 medium . . . . . +

Orange, raw . . . . . 1 medium . . . . . + + +

Orange juice, fresh, canned,  
 or reconstituted frozen;  
 unsweetened . . . . . ¾ cup . . . . . + + +

Papaya, raw . . . . . ¼ medium . . . . . + + +

### Peaches:

Frozen, unsweetened<sup>3</sup> . . . . . ½ cup . . . . . + + +  
 Raw . . . . . 1 medium . . . . . +

Pear, raw . . . . . 1 medium . . . . . +

### Pineapple:

Canned, chunks, juice-pack . ½ cup . . . . . +  
 Raw . . . . . ½ cup . . . . . +

Pineapple juice, canned,  
 unsweetened . . . . . ¾ cup . . . . . + +

Pineapple-grapefruit juice;  
 canned or reconstituted  
 frozen; unsweetened . . . . . ¾ cup . . . . . + + +

Pineapple-orange juice,  
 canned or reconstituted  
 frozen, unsweetened . . . . . ¾ cup . . . . . + + +

Plum, raw . . . . . 1 medium . . . . . +

Pomegranate, raw . . . . . 1 medium . . . . . +

### Raspberries:

Frozen, unsweetened . . . . . ½ cup . . . . . + +  
 Raw . . . . . ½ cup . . . . . + +

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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Strawberries; raw, frozen, or  
 canned; unsweetened . . . . . ½ cup . . . . . + + +  
 Tangelo, raw . . . . . 1 medium . . . . . + + +  
 Tangerine, raw . . . . . 1 medium . . . . . + + +  
 Watermelon, raw . . . . . About 1¾ cups  
 diced . . . . . + + +

## VEGETABLES

Artichoke, globe (french),  
 cooked . . . . . 1 medium . . . . . +

Asparagus, cooked . . . . . ½ cup . . . . . + + +

Beans, green or yellow,  
 cooked . . . . . ½ cup . . . . . +

Beans, lima, cooked . . . . . ½ cup . . . . . +

Bean sprouts, raw or cooked . ½ cup . . . . . +

Broccoli, raw or cooked . . . . ½ cup . . . . . + + +

Brussels sprouts, cooked . . . . ½ cup . . . . . + + +

### Cabbage:

Chinese, cooked . . . . . ½ cup . . . . . + +

Green, raw or cooked . . . . . ½ cup . . . . . + +

Red, raw or cooked . . . . . ½ cup . . . . . + + +

Cauliflower, raw or cooked . . ½ cup . . . . . + + +

Chard, cooked . . . . . ½ cup . . . . . +

Collards, cooked . . . . . ½ cup . . . . . +

Endive, chicory, escarole, or  
 romaine; raw . . . . . 1 cup . . . . . +

Dandelion greens, raw . . . . . ½ cup . . . . . +

Kale, cooked . . . . . ½ cup . . . . . + + +

Kohlrabi, cooked . . . . . ½ cup . . . . . + + +

Mustard greens, cooked . . . . ½ cup . . . . . + +

Okra, cooked . . . . . ½ cup . . . . . +

### Onion, spring:

Cooked . . . . . 1 large . . . . . +

Raw . . . . . 1 medium . . . . . +

Parsnips, cooked . . . . . ½ cup . . . . . +

Peas, green, cooked . . . . . ½ cup . . . . . +

Pepper, sweet, green or red,  
 raw or cooked . . . . . ½ cup . . . . . + + +

Plantain, green or ripe, boiled . 1 medium . . . . . + + +

Poke greens, cooked . . . . . ½ cup . . . . . + + +

### Potato, with skin:

Baked . . . . . 1 medium . . . . . + +

Boiled . . . . . 1 medium . . . . . + +

Pumpkin, cooked . . . . . ½ cup . . . . . +

Radishes, raw . . . . . 6 large . . . . . +

Rutabagas, cooked . . . . . ½ cup . . . . . + +

Snow peas, raw or cooked . . ½ cup . . . . . + + +

### Spinach:

Cooked . . . . . ½ cup . . . . . +

Raw . . . . . 1 cup . . . . . +

### Squash:

Summer, yellow, raw . . . . . ½ cup . . . . . +

Winter, cooked, mashed . . . ½ cup . . . . . +

### Sweetpotato:

Baked or boiled . . . . . 1 medium . . . . . + + +

Canned . . . . . ½ cup . . . . . + + +

Continued

## What Are Good Sources of Vitamin C?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
Tomatoes:		
Cooked .....	1/2 cup .....	+ +
Raw .....	1 medium .....	+ +
Tomato juice or tomato-vegetable juice cocktail, canned .....	3/4 cup .....	+ + +
Turnip greens with turnips, cooked .....	1/2 cup .....	+
Turnips, cooked .....	1/2 cup .....	+
Watercress, raw .....	1/2 cup .....	+

### MEAT, POULTRY, FISH, AND ALTERNATES

#### Meat and Poultry

Liver, braised:		
Beef or pork .....	3 ounces .....	+ +
Chicken .....	1/2 cup diced .....	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
<b>Fish and Seafood</b>		
Clams; steamed, boiled, or canned; drained .....	3 ounces .....	+
Mussels, steamed, boiled, or poached .....	3 ounces .....	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
+ +	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+ + +	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on fortified foods.

<sup>3</sup>Contains added vitamin C.

# VITAMIN B-6

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

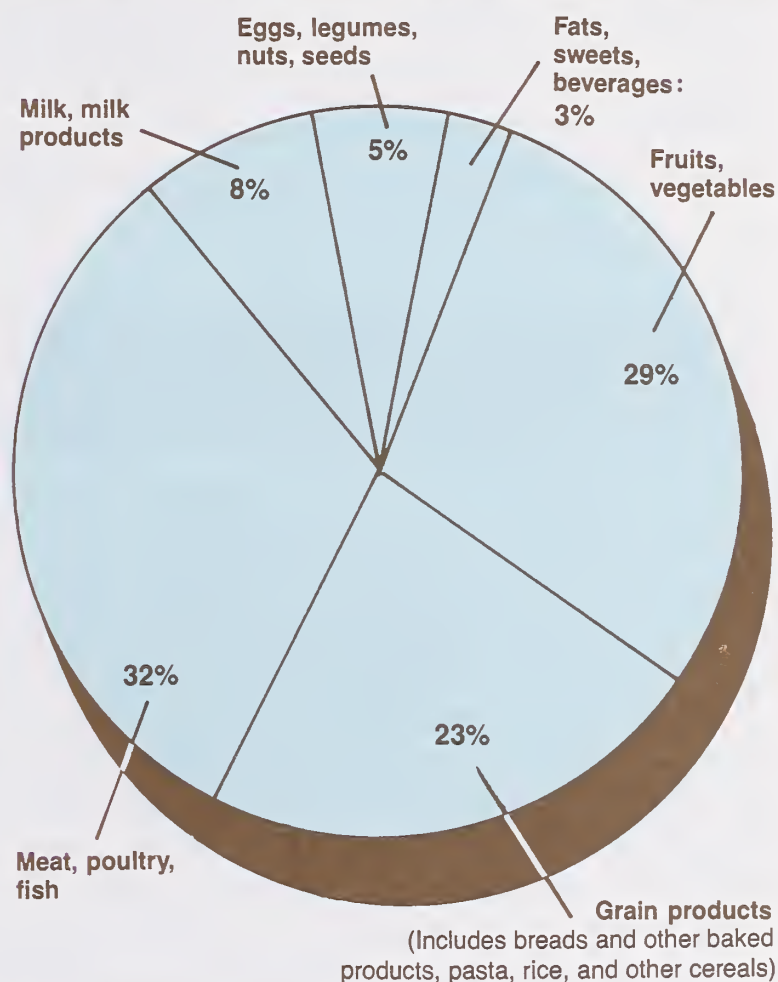
## What Is Meant By a Good Food Source?

A good food source of vitamin B-6 contains a substantial amount of vitamin B-6 in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for vitamin B-6 in a selected serving size. The U.S. RDA for vitamin B-6 is 2 milligrams per day.<sup>1</sup>

The U.S. RDA for vitamin B-6 is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 1.6 milligrams per day for women 19 to 50 years of age and 2 milligrams for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Vitamin B-6?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, 32 percent of the vitamin B-6 in the diets of women came from meat, poultry, and fish; 29 percent from fruits and vegetables; and 23 percent from grain products. Foods that contain small amounts of vitamin B-6 but are not considered good sources can contribute significant amounts of vitamin B-6 to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Vitamin B-6?

Vitamin B-6, a water-soluble vitamin, helps use protein to build body tissue and aids in the metabolism of fat. The need for vitamin B-6 is directly related to protein intake. As the intake of protein increases, the need for vitamin B-6 increases.

## Do We Get Enough Vitamin B-6?

According to recent USDA surveys, the average intake of vitamin B-6 by Americans was below the RDA. The average intake for women 19 to 50 years of age was about 70 percent of the recommended amount. Men tended to have higher intakes than women of the same age, averaging above 90 percent of the recommendations for men.

## How Can We Get Enough Vitamin B-6?

Eating a variety of foods that contain vitamin B-6 is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. Intakes of vitamin B-6 tend to be low in relation to recommendations, and there aren't that many foods that are really good sources; thus, it may take special care to ensure an adequate intake. The list of foods will help you select those that are good sources of vitamin B-6 as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information from

recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Vitamin B-6

Vitamin B-6 can be lost in preparation, cooking, or storage. Cooking losses occur when some vitamin B-6 is dissolved in the cooking liquid. To retain vitamin B-6:

- Serve fruits raw.
- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.
- Roast or broil meat and poultry.

## What About Fortified Foods?

Most ready-to-eat and instant-prepared cereals are fortified with vitamin B-6. Fortified ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for vitamin B-6. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of a cooked vegetable contains more vitamin B-6 than 1/2 cup of the same vegetable served raw, because a serving of the cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Vitamin B-6?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS<sup>2</sup>

Oatmeal, instant, fortified, prepared.....	2/3 cup.....	++
Ready-to-eat cereals, fortified	1 ounce.....	++

## FRUITS

Banana, raw .....	1 medium .....	++
Prunes, dried, cooked, unsweetened .....	1/2 cup .....	+
Prune juice, unsweetened ...	1/2 cup .....	+
Watermelon, raw .....	About 1 3/4 cups diced .....	+

## VEGETABLES

Plantain, green or ripe, boiled	1 medium .....	++
Potato, baked or boiled, with skin .....	1 medium .....	+
Spinach, cooked .....	1/2 cup .....	+
Sweetpotato, baked or boiled	1 medium .....	+
Tomato juice, tomato-juice cocktail, or tomato-vegetable juice cocktail; canned .....	3/4 cup .....	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

#### Beef:

Brisket, braised, lean only .....	3 ounces .....	+
Ground; extra lean, lean, or regular; baked or broiled .....	1 patty .....	+
Pot roast, braised, lean only .....	3 ounces .....	+
Roast, rib, roasted, lean only .....	3 ounces .....	+
Shortribs, braised, lean only .....	3 ounces .....	+
Steak; baked, broiled, or braised; lean only .....	3 ounces .....	+
Stew meat, simmered, lean only .....	3 ounces .....	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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### Chicken, without skin:

Breast:		
Broiled .....	1/2 breast .....	+
Roasted .....	1/2 breast .....	++
Leg (thigh and drumstick), broiled or roasted .....	1 leg .....	+
Cornish hen, roasted, without skin .....	1/2 hen .....	++
Ham, fresh, roasted, lean only .....	3 ounces .....	+
Liver, braised:		
Beef .....	3 ounces .....	++
Calf or pork .....	3 ounces .....	+
Chicken .....	1/2 cup .....	+
Pork, lean only:		
Chop, baked or broiled ..	1 chop .....	+
Roast, loin, roasted ....	3 ounces .....	+
Turkey, light or dark meat, roasted, without skin ....	3 ounces .....	+
Veal, chop, braised, lean only .....	1 chop .....	+

### Fish and Seafood

Cod, croaker, haddock, mackerel, ocean perch, porgy, or sea bass; baked or broiled .....	3 ounces .....	+
Mackerel, canned, drained .	3 ounces .....	+
Mullet or trout, baked or broiled .....	3 ounces .....	+
Salmon, canned, drained ..	3 ounces .....	+
Swordfish steak, baked or broiled .....	3 ounces .....	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on fortified foods.



# VITAMIN B-12

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

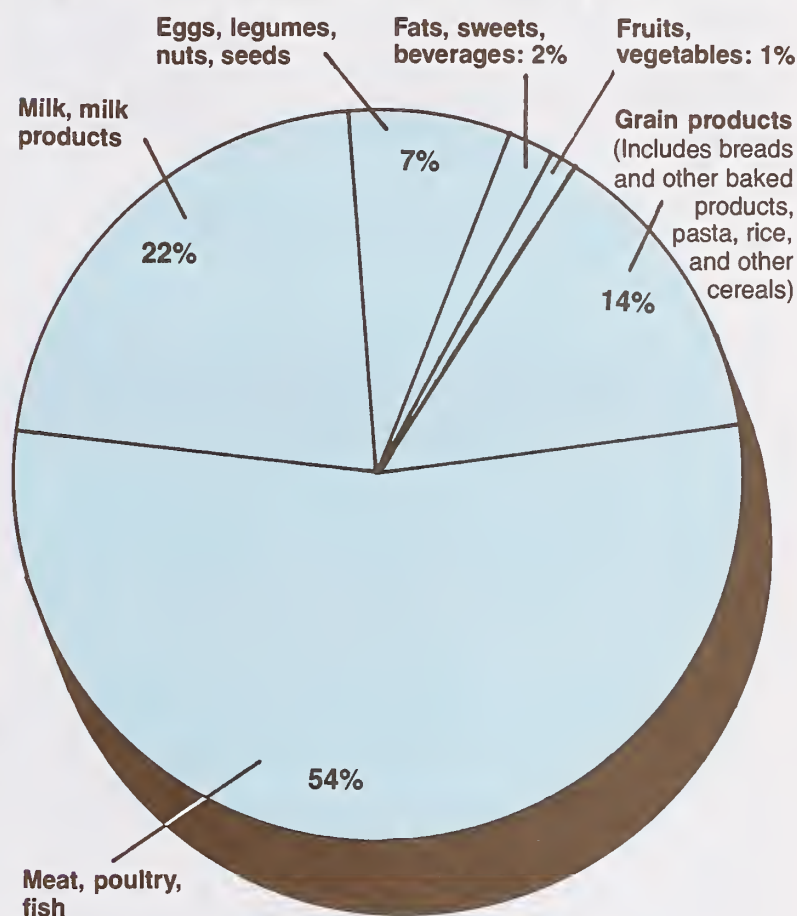
## What Is Meant By A Good Food Source?

A good food source of vitamin B-12 contains a substantial amount of vitamin B-12 in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for vitamin B-12 in a selected serving size. The U.S. RDA for vitamin B-12 is 6 micrograms per day.<sup>1</sup>

The U.S. RDA for vitamin B-12 is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 2 micrograms per day for both women and men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Vitamin B-12?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, 54 percent of the vitamin B-12 in the diets of women came from meat, poultry, and fish and 22 percent came from milk and milk products. Although grain products contributed 14 percent of the vitamin B-12 consumed by women, the B-12 in these products was provided by the meat, poultry, fish, eggs, and milk they may contain. Likewise, the vitamin B-12 contributed by vegetables and fruits, legumes, nuts, and seeds, and by fats, sweets, and beverages comes from added animal products. Vitamin B-12 is found only

in animal products. Foods that contain small amounts of vitamin B-12 but are not considered good sources can contribute significant amounts of vitamin B-12 to an individual's diet if these foods are eaten often or in large amounts.

### **Why Do We Need Vitamin B-12?**

Vitamin B-12, a water-soluble vitamin, aids in forming red blood cells and in building genetic material. Vitamin B-12 also helps in the functioning of the nervous system and in metabolizing protein and fat in the body.

### **Do We Get Enough Vitamin B-12?**

According to recent USDA surveys, the majority of Americans met their RDA for vitamin B-12.

### **How Can We Get Enough Vitamin B-12?**

Eating a variety of foods that contain vitamin B-12 is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements.

However, vegetarians who do not eat any animal products may need a supplemental source of vitamin B-12. The list of foods will help you select those that are good sources of vitamin B-12 as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

### **How To Prepare Foods To Retain Vitamin B-12**

Some vitamin B-12 can be lost from foods during cooking. To retain vitamin B-12, roast or broil meat or fish.

### **What Is a Serving?**

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amounts eaten of some meats may be easier to estimate by the piece rather than by weight. For example, the selected serving size for lamb is 1 chop weighing 2-3/4 ounces, 1 patty weighing 3-1/4 ounces, or 3 ounces of roast shoulder.

# What Are Good Sources Of Vitamin B-12?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

#### Beef:

Brisket, braised, lean only	3 ounces	++
Ground, baked or broiled:		
Extra lean	1 patty	+++
Lean or regular	1 patty	++
Pot roast, braised, lean only	3 ounces	++
Roast, rib, roasted, lean only	3 ounces	++
Shortribs, braised, lean only	3 ounces	+++
Steak, lean only:		
Baked or broiled	3 ounces	+++
Braised	3 ounces	++
Stew meat, simmered, lean only	3 ounces	++
Frankfurter, beef	1	+
Lamb:		
Chop, shoulder; braised, broiled, or baked; lean only	1 chop	+++
Ground, cooked	1 patty	++
Roast, shoulder, roasted, lean only	3 ounces	++
Liver, braised:		
Beef, calf, or pork	3 ounces	+++
Chicken or turkey	½ cup diced	+++
Liverwurst	1 ounce	+++
Pork, lean only:		
Chop, baked or broiled	1 chop	+
Roast, loin, roasted	3 ounces	+
Tongue, braised	3 ounces	+++
Veal, roast, leg, roasted, lean only	3 ounces	++

### Fish and Seafood

Carp, cod, flounder, haddock, ocean perch, pompano, or porgy; baked or broiled	3 ounces	+
Catfish, perch, pike, or whiting; baked or broiled	3 ounces	++
Clams; steamed, boiled, or canned; drained	3 ounces	+++
Crabmeat, steamed	3 ounces	+++

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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Croaker, baked or broiled	3 ounces	+++
Lobster, steamed or boiled	3 ounces	+++
Mackerel; baked, broiled, or canned; drained	3 ounces	+++
Mussels, steamed, boiled, or poached	3 ounces	+++
Oysters:		
Baked, broiled, or steamed	3 ounces	+++
Canned, undrained	3 ounces	+++
Salmon:		
Baked or broiled	3 ounces	+
Steamed, poached, or canned; drained	3 ounces	+++
Scallops:		
Baked or broiled	3 ounces	+
Boiled or steamed	3 ounces	+
Shrimp; broiled, steamed, boiled, or canned; drained	3 ounces	+
Swordfish steak, baked or broiled	3 ounces	++
Trout, baked or broiled	3 ounces	+++
Tuna, canned, drained	3 ounces	++

### Eggs

Egg, whole, cooked	1 large egg	+
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## MILK, CHEESE, AND YOGURT

Cottage cheese, regular or lowfat	½ cup	+
Ice milk, soft-serve, not chocolate	½ cup	+
Milk; whole, lowfat, or skim	1 cup	+
Yogurt:		
Flavored or fruit, made with whole or lowfat milk	8 ounces	+
Frozen	8 ounces	+
Plain:		
Made with whole milk	8 ounces	+
Made with lowfat or nonfat milk	8 ounces	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age



# FOLATE

**(Folacin, Folic Acid)**

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

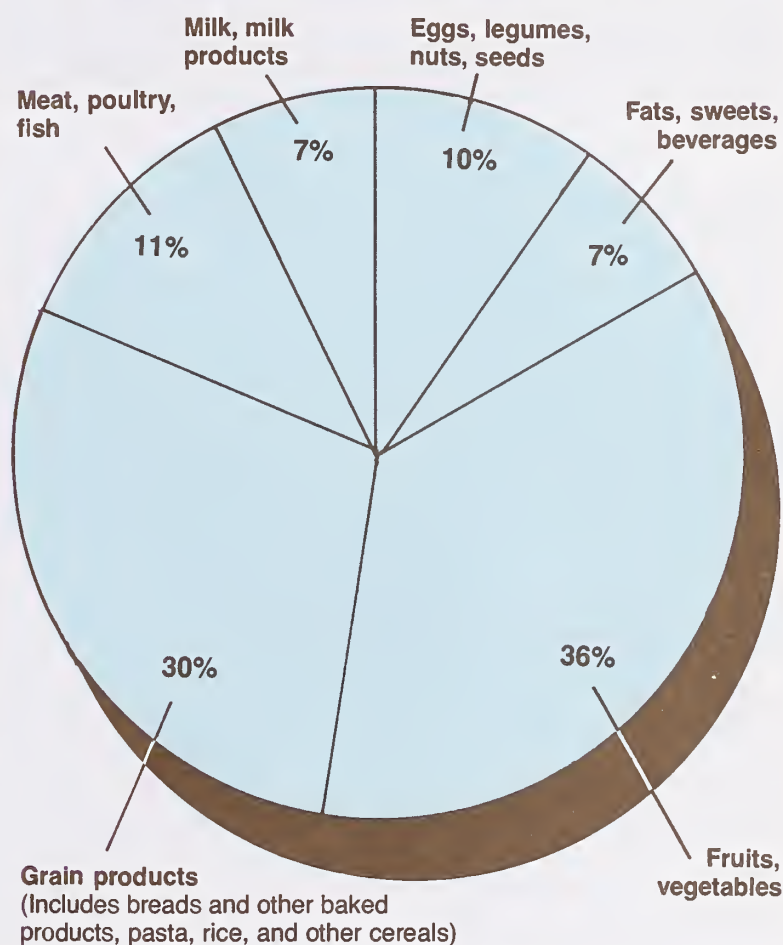
## What Is Meant By a Good Food Source?

A good food source of folate contains a substantial amount of folate in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Dietary Allowance (U.S. RDA) for folate in a selected serving size. The U.S. RDA for folate is 400 micrograms per day.<sup>1</sup>

The U.S. RDA for folate is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 180 micrograms per day for women 19 to 50 years of age and 200 micrograms for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Folate?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, over one-third of the folate in the diets of women was provided by fruits and vegetables. Of this group, citrus fruits and tomatoes and vegetables—other than dark-green or deep-yellow vegetables or potatoes—contributed the most to folate intakes. Grain products were also important sources. Foods that contain small amounts of folate but are not considered good sources can contribute significant amounts of folate to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Folate?

Folate, a water-soluble vitamin, helps the body form red blood cells and aids in the formation of genetic material within every body cell.

## Do We Get Enough Folate?

According to recent USDA surveys, the average intake of folate by women and men 19 to 50 years of age met their RDA for folate.

## How Can We Get Enough Folate?

Eating a variety of foods that contain folate is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of folate as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Folate

Folate can be lost from foods during preparation, cooking, or storage. To retain folate:

- Serve fruits and vegetables raw whenever possible.
- Steam, boil, or simmer vegetables in a minimal amount of water.
- Store vegetables in the refrigerator.

## What About Fortified Foods?

Most ready-to-eat cereals are fortified with folate. Fortified ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for folate. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of a cooked vegetable contains more folate than a 1/2 cup serving of the same vegetable served raw, because a serving of cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Folate?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

English muffin, whole-wheat . . . . .	1 . . . . .	+
Pita bread, whole-wheat . . . . .	1 small . . . . .	+
Ready-to-eat cereals, fortified <sup>2</sup> . . . . .	1 ounce . . . . .	++
Wheat germ, plain . . . . .	2 tablespoons . . . . .	+

## FRUITS

Grapefruit and orange juice, frozen, reconstituted . . . . .	¾ cup . . . . .	+
Orange juice:		
Fresh . . . . .	¾ cup . . . . .	+
Frozen, reconstituted . . . . .	¾ cup . . . . .	+

## VEGETABLES

Artichoke, globe (french), cooked . . . . .	1 medium . . . . .	+
Asparagus, cooked . . . . .	½ cup . . . . .	+
Beets, cooked . . . . .	½ cup . . . . .	+
Broccoli, cooked . . . . .	½ cup . . . . .	+
Brussels sprouts, cooked . . . . .	½ cup . . . . .	+
Cauliflower, cooked . . . . .	½ cup . . . . .	+
Chinese cabbage, cooked . . . . .	½ cup . . . . .	+
Corn, cream style, cooked . . . . .	½ cup . . . . .	+
Endive, chicory, escarole, or romaine; raw . . . . .	1 cup . . . . .	+
Mustard greens, cooked . . . . .	½ cup . . . . .	+
Okra, cooked . . . . .	½ cup . . . . .	+
Parsnips, cooked . . . . .	½ cup . . . . .	+
Peas, green, cooked . . . . .	½ cup . . . . .	+
Spinach:		
Cooked . . . . .	½ cup . . . . .	++
Raw . . . . .	1 cup . . . . .	+
Turnip greens, cooked . . . . .	½ cup . . . . .	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

Liver, braised:		
Beef or calf . . . . .	3 ounces . . . . .	+++
Pork . . . . .	3 ounces . . . . .	++
Chicken or turkey . . . . .	½ cup diced . . . . .	+++

### Fish and Seafood

Crabmeat, steamed . . . . .	3 ounces . . . . .	+
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### Dry Beans, Peas, and Lentils

Beans, cooked:		
Bayo, black, brown, calico, chickpeas (garbanzo beans), lima, mexican, pinto, or white . . . . .	½ cup . . . . .	+
Black-eyed peas (cowpeas) . . . . .	½ cup . . . . .	+++
Red kidney . . . . .	½ cup . . . . .	++
Lentils, cooked . . . . .	½ cup . . . . .	+++
Peas, split, green or yellow, cooked . . . . .	½ cup . . . . .	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on fortified foods.



# THIAMIN

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

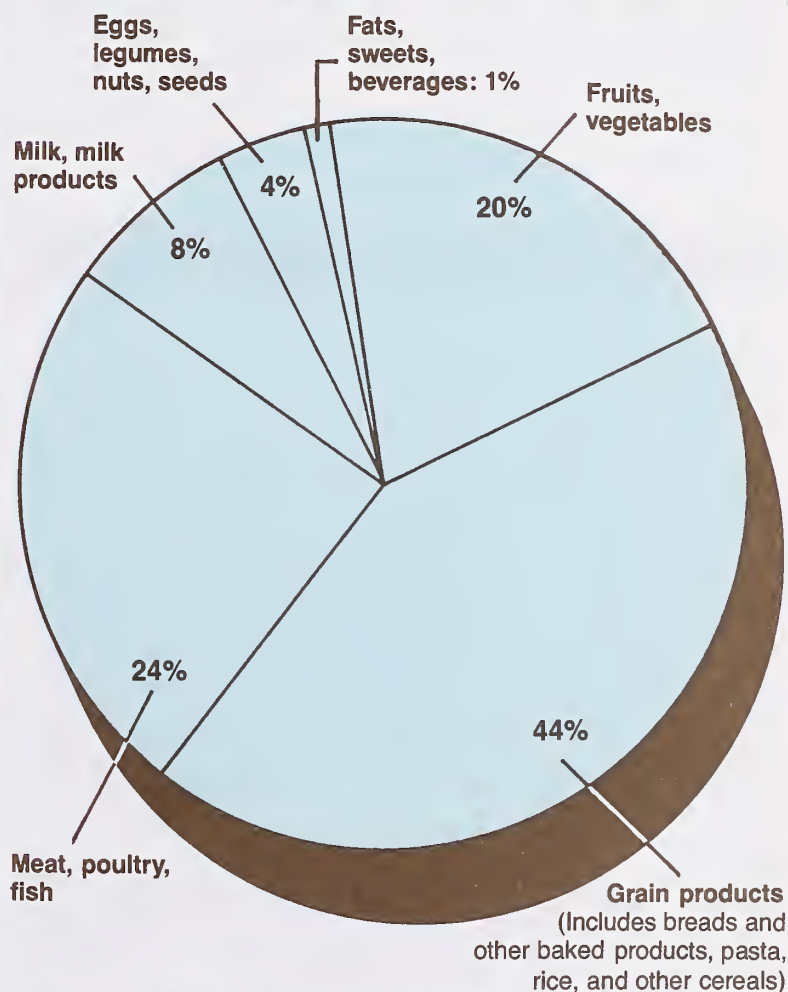
## What Is Meant By a Good Food Source?

A good food source of thiamin contains a substantial amount of thiamin in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for thiamin in a selected serving size. The U.S. RDA for thiamin is 1.5 milligrams per day.<sup>1</sup>

The U.S. RDA for thiamin is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 1.1 milligrams per day for women 19 to 50 years of age and 1.5 milligrams for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Thiamin?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, grain products—including breads, cereals, pasta, and rice—supplied 44 percent of the thiamin in the diets of women. Other food groups providing considerable thiamin were meat, poultry, and fish (24 percent) and fruits and vegetables (20 percent). Foods that contain small amounts of thiamin but are not considered good sources can contribute significant amounts of thiamin to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Thiamin?

Thiamin, a water-soluble vitamin, helps the body release energy from carbohydrates during metabolism. Thus, persons who expend more energy and have a higher intake of calories need more thiamin than those who eat fewer calories. Thiamin also plays a vital role in the normal functioning of the nervous system.

## Do We Get Enough Thiamin?

According to recent USDA surveys, men 19 to 50 years of age met their RDA for thiamin. The average intake by women of the same age was slightly below the RDA.

## How Can We Get Enough Thiamin?

Eating a variety of foods that contain thiamin is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of thiamin as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Thiamin

Some thiamin can be lost from foods during preparation and cooking because thiamin may be dissolved in the cooking liquid.

Storage losses are small. To retain thiamin:

- Use enriched or whole-grain pasta or rice and do not wash before cooking or rinse after cooking.
- Cook vegetables in a minimal amount of water.
- Roast meat at a moderate temperature and cook only until it is done—overcooking at a high temperature destroys thiamin.

## What About Enriched Or Fortified Foods?

Pasta and most breads made from refined flours are enriched with thiamin because thiamin is one of the nutrients lost in processing. Other nutrients added to refined flours and pasta are iron, niacin, and riboflavin. Enriched products or products made from enriched flour are labeled as such.

Most ready-to-eat and instant-prepared cereals are fortified with thiamin. Fortified ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for thiamin. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amounts eaten of some meats may be easier to estimate by the piece rather than by weight. For example, a selected serving size for pork is 1 chop, weighing about 2-1/2 ounces, or 3 ounces of pork depending on the cut.

# What Are Good Sources Of Thiamin?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS<sup>2</sup>

Bagel, plain, pumpernickel, or whole-wheat	1 medium	+
Bread, raisin, rye, or white	2 slices	+
Cornbread	1 piece, 2½ inches square	+
Farina, regular or quick, cooked	⅔ cup	+
English muffin, plain, plain with raisins, or whole-wheat	1	+
Grits, corn or hominy, regular or instant, cooked	⅔ cup	+
Macaroni, noodles, or spaghetti, cooked	1 cup	+
Oatmeal:		
Instant, fortified, prepared	⅔ cup	++
Regular or quick, cooked	⅔ cup	+
Pita bread, plain or whole-wheat	1 small	+
Pretzel, soft	1	+
Ready-to-eat cereals, fortified	1 ounce	++
Rice, white, cooked	⅔ cup	+
Rolls:		
Hamburger or frankfurter	1	+
White, hard	1 medium	+
Waffles, plain	2 4-inch squares	+
Wheat germ, plain	2 tablespoons	+

## FRUITS

Melon balls (cantaloup and honeydew), frozen, unsweetened	½ cup	+
Orange juice, fresh	¾ cup	+
Watermelon, raw	About 1¾ cups diced	+

## VEGETABLES

Corn, cooked	½ cup	+
Jerusalem artichoke, raw	½ cup	+
Peas, green, cooked	½ cup	+
Peas and carrots, cooked	½ cup	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

Ham, roasted, lean only:		
Fresh	3 ounces	++
Smoked or cured	3 ounces	+++
Liver, beef or pork, braised	3 ounces	+
Pork:		
Chop, baked or broiled, lean only	1 chop	+++
Ground, cooked	3 ounces	++
Roast, loin, roasted, lean only	3 ounces	+++
Steak or cutlet, baked or broiled, lean only	3 ounces	+++

### Fish and Seafood

Mackerel or salmon, baked or broiled	3 ounces	+
Mussels, steamed, boiled, or poached	3 ounces	+
Oysters:		
Steamed	3 ounces	+
Canned, undrained	3 ounces	+
Pompano, baked or broiled	3 ounces	++

### Dry Beans, Peas, and Lentils

Peas, split, green or yellow, cooked	½ cup	+
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### Nuts and Seeds

Brazil nuts	2 tablespoons	+
Pine nuts (pignolias)	2 tablespoons	+
Sunflower seeds, hulled, unroasted	2 tablespoons	++

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>Breads, pasta, cereals, and grits listed are enriched unless otherwise noted. See section on enriched or fortified foods.



# RIBOFLAVIN

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

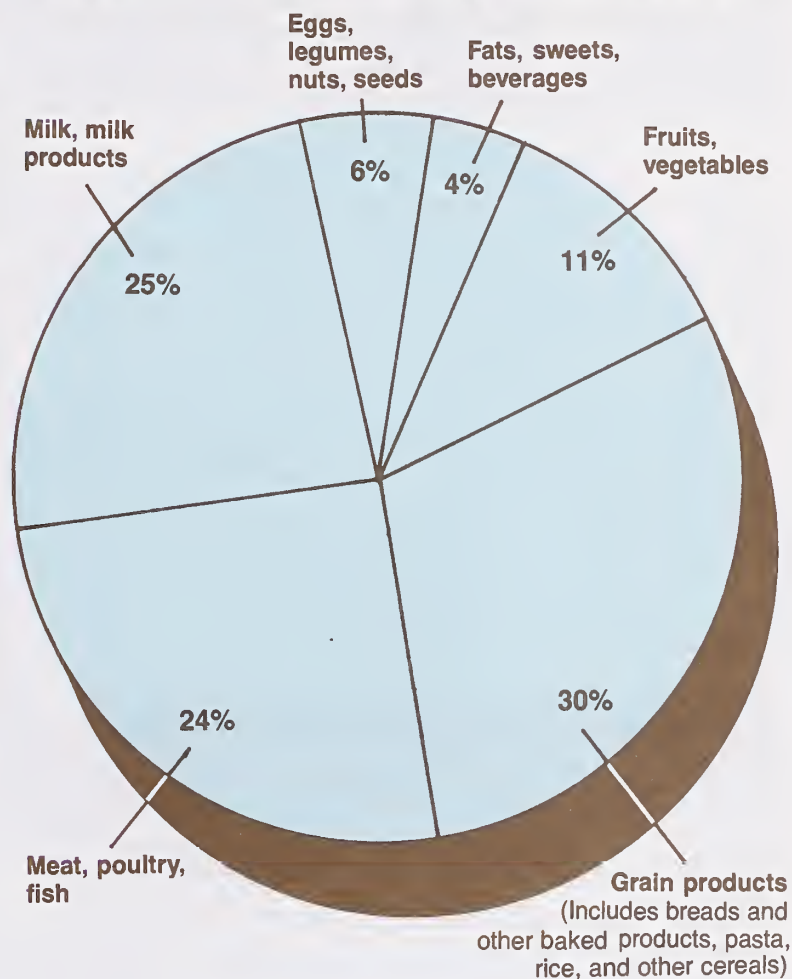
## What Is Meant By a Good Food Source?

A good food source of riboflavin contains a substantial amount of riboflavin in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for riboflavin in a selected serving size. The U.S. RDA for riboflavin is 1.7 milligrams per day.<sup>1</sup>

The U.S. RDA for riboflavin is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 1.3 milligrams per day for women 19 to 50 years of age and 1.7 milligrams for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Riboflavin?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, 30 percent of the riboflavin in the diets of women came from grain products such as breads and cereals. Milk and milk products supplied about 25 percent and meat, poultry, and fish provided about 24 percent. Foods that contain small amounts of riboflavin but are not considered good sources can contribute significant amounts of riboflavin to an individual's diet if these foods are eaten often or in large amounts.

## **Why Do We Need Riboflavin?**

Riboflavin, a water-soluble vitamin, helps the body release energy from protein, fat, and carbohydrates during metabolism.

## **Do We Get Enough Riboflavin?**

According to recent USDA surveys, the intake of riboflavin by American women and men 19 to 50 years of age averaged above the RDA.

## **How Can We Get Enough Riboflavin?**

Eating a variety of foods that contain riboflavin is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of riboflavin as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## **How To Prepare Foods To Retain Riboflavin**

Riboflavin can be lost from foods during storage and cooking. To retain riboflavin:

- Store foods in containers through which light cannot pass.

- Cook vegetables in a minimal amount of water.
- Roast or broil meat.

## **What About Enriched Or Fortified Foods?**

Pasta and most breads made from refined flours are enriched with riboflavin because riboflavin is one of the nutrients lost in processing. Other nutrients added to refined flours and pasta are iron, thiamin, and niacin. Enriched products or products made from enriched flour are labeled as such.

Most ready-to-eat and instant-prepared cereals are fortified with riboflavin. Fortified, ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for riboflavin. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## **What Is a Serving?**

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, the edible part of a cooked chicken leg (thigh and drumstick) weighs more than the edible part of a cooked chicken breast half. Therefore, the chicken leg appears on the list while the chicken breast half does not. The chicken breast half provides the nutrient—but just not enough to be considered a good source.

# What Are Good Sources Of Riboflavin?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS<sup>2</sup>

Bagel, plain, pumpnickel, or whole-wheat	1 medium	+
English muffin, plain	1	+
Multigrain cereal, cooked	2/3 cup	+
Oatmeal, instant, fortified, prepared	2/3 cup	+
Pancakes, plain	2 4-inch pancakes	+
Pita bread, plain	1 small	+
Ready-to-eat cereals, fortified	1 ounce	++
Waffles, plain or bran	2 4-inch squares	+

## VEGETABLES

Broccoli, cooked	1/2 cup	+
Mushrooms, cooked	1/2 cup	+
Spinach, cooked	1/2 cup	+
Sweetpotato, boiled	1 medium	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

Beef:		
Ground, extra lean or lean, baked or broiled	1 patty	+
Steak, baked or broiled, lean only	3 ounces	+
Stew meat, simmered, lean only	3 ounces	+
Chicken leg (thigh and drumstick), broiled or roasted without skin	1 leg	+
Cornish hen, roasted, without skin	1/2 hen	+
Ham, fresh, roasted, lean only	3 ounces	+
Lamb, lean only:		
Chop, shoulder; braised, broiled, or baked	1 chop	+
Roast, shoulder, roasted	3 ounces	+
Liver, braised:		
Beef, calf, or pork	3 ounces	+++
Chicken or turkey	1/2 cup diced	+++
Liverwurst	1 ounce	++
Pork, lean only:		
Chop, baked or broiled	1 chop	+
Roast, loin or shoulder, roasted	3 ounces	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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Tongue, braised	3 ounces	+
Turkey, dark meat, roasted, without skin	3 ounces	+
Veal, roast, leg, roasted, lean only	3 ounces	+

### Fish and Seafood

Clams; steamed, boiled, or canned; drained	3 ounces	+
Mackerel or trout, baked or broiled	3 ounces	+
Mackerel, canned, drained	3 ounces	+
Mussels, steamed, boiled, or poached	3 ounces	+
Oysters, canned, undrained	3 ounces	+

### Nuts and Seeds

Almonds, roasted	2 tablespoons	+
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## MILK, CHEESE, AND YOGURT

### Cheese:

Cottage, regular or lowfat	1/2 cup	+
Feta	1 ounce	+

### Ice milk, soft-serve,

not chocolate	1/2 cup	+
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### Milk:

Buttermilk	1 cup	+
Chocolate	1 cup	+
Evaporated, whole or skim, diluted	1 cup	+
Whole, lowfat, or skim	1 cup	+

### Yogurt:

Frozen	8 ounces	+
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### Plain:

Made with whole milk	8 ounces	+
Made with lowfat or nonfat milk	8 ounces	++

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>Breads and cereals listed are enriched unless otherwise noted. See section on enriched or fortified foods.



# NIACIN

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

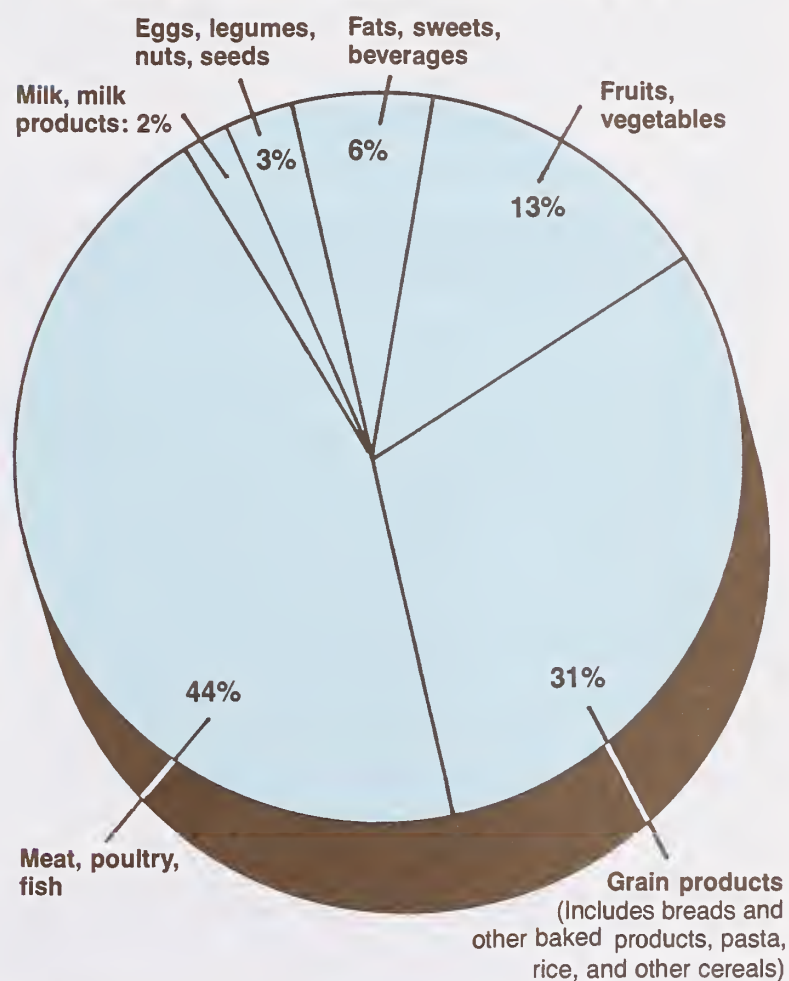
## What Is Meant By a Good Food Source?

A good food source of niacin contains a substantial amount of niacin in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (U.S. RDA) for niacin in a selected serving size. The U.S. RDA for niacin is 20 milligrams per day.<sup>1</sup>

The U.S. RDA for niacin is the amount of the vitamin used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 15 milligrams per day for women 19 to 50 years of age and 19 milligrams for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Niacin?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, 44 percent of the niacin in the diets of women came from meat, poultry, and fish. Grain products such as breads and cereals supplied about 31 percent of the niacin consumed. Foods that contain small amounts of niacin but are not considered good sources can contribute significant amounts of niacin to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Niacin?

Niacin, a water-soluble vitamin, helps the body release energy from protein, fat, and carbohydrate during metabolism.

## Do We Get Enough Niacin?

According to recent USDA surveys, the intake of niacin by American women and men 19 to 50 years of age averaged above the RDA.

Niacin can be formed in the body from tryptophan, an essential amino acid found in meat, poultry, fish, and eggs. Therefore, if your diet contains these foods, your need for niacin from other sources will be reduced.

## How Can We Get Enough Niacin?

Eating a variety of foods that contain niacin is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of niacin as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Niacin

Niacin is fairly stable, but some niacin can be lost during cooking as it dissolves in the cooking liquid. Losses in preparation and

storage are slight. To retain niacin:

- Cook vegetables in a minimal amount of water.
- Roast or broil beef, veal, lamb, and poultry. (Pork keeps about the same amount of niacin regardless of cooking method.)

## What About Enriched Or Fortified Foods?

Pasta and most breads made from refined flours are enriched with niacin because niacin is one of the nutrients lost in processing. Other nutrients added to refined flours and pasta are iron, thiamin, and riboflavin. Enriched products or products made from enriched flour are labeled as such.

Most ready-to-eat and instant-prepared cereals are fortified with niacin. Fortified ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for niacin. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 3 ounces of cooked lean pork loin roast contains more niacin than a cooked pork chop, because the chop has less than 3 ounces of lean meat. Therefore, a serving of the pork loin roast has 25 percent of the U.S. RDA while the pork chop has less than 20 percent.

# What Are Good Sources Of Niacin?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
<b>BREADS, CEREALS, AND OTHER GRAIN PRODUCTS<sup>2</sup></b>		
Bagel, plain or whole-wheat	1 medium	+
Bulgur, cooked or canned	2/3 cup	+
English muffin, plain or whole-wheat	1	+
Muffin, bran	1 medium	+
Oatmeal, instant, fortified, prepared	2/3 cup	+
Pita bread, plain or whole-wheat	1 small	+
Pretzel, soft	1	+
Ready-to-eat cereals, fortified	1 ounce	++
Roll, hoagie or submarine	1	+

## VEGETABLES

Mushrooms, cooked	1/2 cup	+
Potato, boiled, with skin	1 medium	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

#### Beef:

Brisket, braised, lean only	3 ounces	+
Ground; extra lean, lean, or regular; baked or broiled	1 patty	+
Roast, rib, roasted, lean only	3 ounces	+
Steak, baked or broiled, lean only	3 ounces	+
Stew meat, simmered, lean only	3 ounces	+

#### Chicken, without skin:

Breast, broiled or roasted	1/2 breast	+++
Leg (thigh and drumstick), broiled or roasted	1 leg	++
Light or dark meat, broiled, roasted, or stewed	3 ounces	++

#### Cornish hen, roasted,

without skin	1/2 hen	+++
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#### Ham, roasted, lean only:

Fresh	3 ounces	+
Smoked or cured	3 ounces	+

#### Lamb, lean only:

Chop, shoulder; baked, braised, or broiled	1 chop	++
Roast, shoulder, roasted	3 ounces	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
<b>Liver, braised:</b>		
Beef, calf, or pork	3 ounces	++
Chicken	1/2 cup diced	+
Liverwurst	1 ounce	+
<b>Pork, lean only:</b>		
Chop, baked or broiled	1 chop	+
Roast, loin, roasted	3 ounces	++
<b>Turkey:</b>		
Ground, cooked	3 ounces	+
Light or dark meat, roasted, without skin	3 ounces	+
<b>Veal, lean only:</b>		
Chop, braised	1 chop	+++
Roast, leg, roasted	3 ounces	++

### Fish and Seafood

Catfish, flounder, haddock, pompano, or pike; baked or broiled	3 ounces	+
Crabmeat, steamed	3 ounces	+
Croaker, porgy, or trout; baked or broiled	3 ounces	+
<b>Mackerel:</b>		
Baked or broiled	3 ounces	+++
Canned, drained	3 ounces	++
Mullet, baked or broiled	3 ounces	++
<b>Salmon:</b>		
Baked, broiled, poached, or steamed	3 ounces	++
Canned, drained	3 ounces	++
<b>Shrimp; boiled, broiled, steamed, or canned;</b>		
drained	3 ounces	+
<b>Swordfish steak, baked or broiled</b>		
	3 ounces	+++
Tuna, canned, drained	3 ounces	+

### Nuts and Seeds

Peanuts, roasted or dry-roasted	2 tablespoons	+
Peanut butter	2 tablespoons	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>Breads and cereals listed are enriched unless otherwise noted. See section on enriched or fortified foods.



# CALCIUM

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

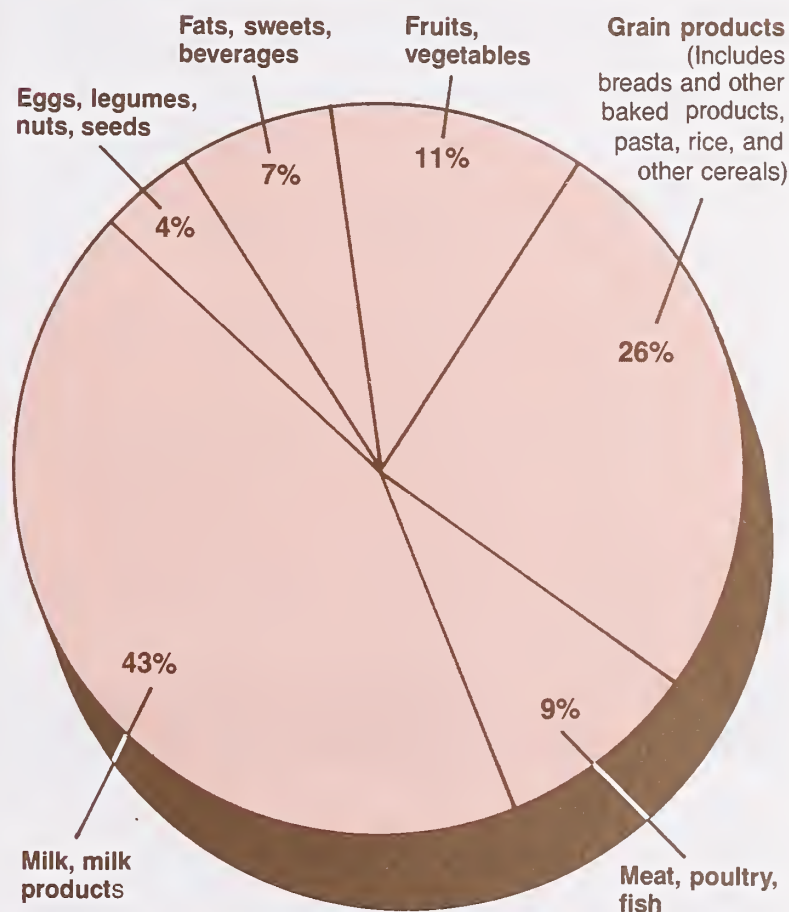
## What Is Meant By a Good Food Source?

A good food source of calcium contains a substantial amount of calcium in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Dietary Allowance (U.S. RDA) for calcium in a selected serving size. The U.S. RDA for calcium is 1,000 milligrams per day.<sup>1</sup>

The U.S. RDA for calcium is the amount of the mineral used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 1,200 milligrams per day for women and men 19 to 24 years of age and 800 milligrams for women and men 25 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Calcium?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, almost one-half of the calcium in the diets of women was provided by milk and milk products and 26 percent of the calcium was supplied by grain products. Foods that contain small amounts of calcium but are not considered good sources can contribute significant amounts of calcium to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Calcium?

Calcium, a mineral, is used for building bones and teeth and in maintaining bone strength. Calcium is also used in muscle contraction, blood clotting, and maintenance of cell membranes.

## Do We Get Enough Calcium?

According to recent USDA surveys, average calcium intakes for women and younger men are below their RDA. The average calcium intake by women 19 to 34 years of age was about 665 milligrams per day, and the intake by women 35 to 50 years of age was about 565 milligrams. Average calcium intake by men 19 to 34 years of age was 975 milligrams.

Calcium absorption is dependent upon the calcium needs of the body, the foods eaten, and the amount of calcium in the foods eaten. Vitamin D, whether from diet or exposure to the ultraviolet light of the sun, increases calcium absorption. Calcium absorption tends to decrease with increased age for both men and women.

## How Can We Get Enough Calcium?

Eating a variety of foods that contain calcium is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of calcium as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for

recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Calcium

Calcium is lost in cooking some foods even under the best conditions. To retain calcium:

- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.

## What About Fortified Foods?

Some foods, such as orange juice, bread, and ready-to-eat cereals, are not normally good sources of calcium but may have had calcium added. Most instant-prepared cereals are fortified with calcium. Since these products vary in the amount of calcium provided, check the label on the carton or package for the percentage of the U.S. RDA for a specific product.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of cooked vegetable contains more calcium than 1/2 cup of the same vegetable served raw, because a serving of cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Calcium?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

English muffin, plain with raisins	1	+
Muffin, bran	1 medium	+
Oatmeal, instant, fortified, prepared <sup>2</sup>	2/3 cup	+
Pancakes, plain, fruit, buckwheat, or whole-wheat	2 4-inch pancakes	+
Waffles:		
Bran, cornmeal, or fruit	2 4-inch squares	+
Plain	2 4-inch squares	++

## VEGETABLES

Broccoli, cooked	1/2 cup	+
Spinach, cooked	1/2 cup	+
Turnip greens, cooked	1/2 cup	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Fish and Seafood

Mackerel, canned, drained	3 ounces	+
Ocean perch, baked or broiled	3 ounces	+
Salmon, canned, drained	3 ounces	+

### Dry Beans, Peas, and Lentils

Tofu (bean curd) <sup>3</sup>	1/2 cup cubed	++
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## MILK, CHEESE, AND YOGURT

### Cheese, natural:

Blue, brick, camembert, feta, gouda, monterey, mozzarella, muenster, provolone, or roquefort	1 ounce	+
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Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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### Cheese, natural (continued):

Gruyere or swiss	1 ounce	++
Parmesan (hard) or romano	1 ounce	++

### Cheese, process, cheddar or

swiss	3/4 ounce	+
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Cheese, ricotta	1/2 cup	++
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### Ice cream or ice milk, soft-

serve	1/2 cup	+
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### Milk:

Buttermilk	1 cup	++
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Chocolate	1 cup	++
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Dry, nonfat, reconstituted	1 cup	++
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### Evaporated, whole or skim,

diluted	1 cup	++
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Lowfat or skim	1 cup	++
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Whole	1 cup	++
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### Yogurt:

#### Flavored or fruit, made with

whole or lowfat milk	8 ounces	++
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Frozen	8 ounces	++
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#### Plain:

Made with whole milk	8 ounces	++
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#### Made with lowfat or

nonfat milk	8 ounces	+++
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<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on fortified foods.

<sup>3</sup>If made with calcium sulfate.



# IRON

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

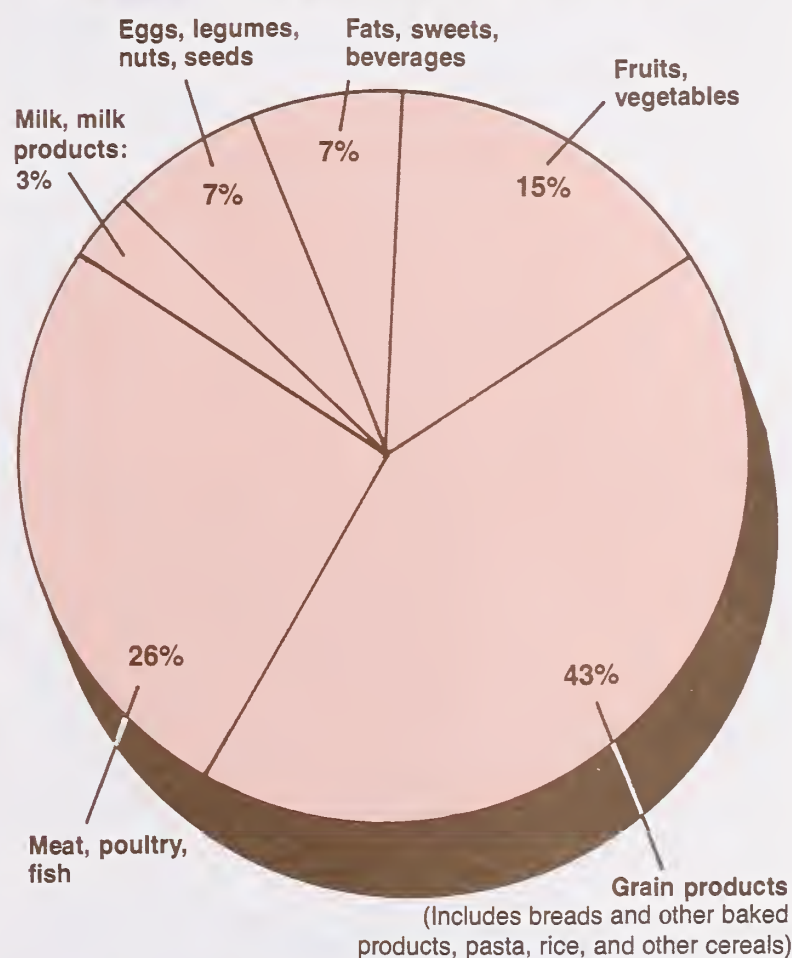
## What Is Meant By a Good Food Source?

A good food source of iron contains a substantial amount of iron in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Dietary Allowance (U.S. RDA) for iron in a selected serving size. The U.S. RDA for iron is 18 milligrams per day.<sup>1</sup>

The U.S. RDA for iron is the amount of the mineral used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 15 milligrams per day for women 19 to 50 years of age and 10 milligrams for men 25 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Iron?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, 43 percent of the iron in the diets of women was contributed by grain products and 26 percent was supplied by meat, poultry, and fish. Foods that contain small amounts of iron but are not considered good sources can contribute significant amounts of iron to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Iron?

Iron, a mineral, functions primarily as a carrier of oxygen in the body, both as a part of hemoglobin in the blood and of myoglobin in the muscles.

## Do We Get Enough Iron?

According to recent USDA surveys, over three-fourths of American women 19 to 50 years of age had iron intakes below 80 percent of their RDA. Average iron intake was 67 percent of the RDA. Men of the same age met their RDA.

The ability of the body to absorb and utilize iron from different foods varies. The iron in meat, poultry, and fish is absorbed and utilized more readily than iron in other foods. The presence of these animal products in a meal increases the availability of iron from other foods. The presence of vitamin C (ascorbic acid) in a meal also increases iron absorption. The body increases or decreases iron absorption according to need. The body absorbs iron more efficiently when iron stores are low and during growth spurts or pregnancy. The most common indication of poor iron status is iron deficiency anemia, a condition in which the size and number of red blood cells are reduced. This condition may result from inadequate intake of iron or from blood loss.

## How Can We Get Enough Iron?

Eating a variety of foods that contain iron is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. Intakes of iron tend to be low in relation to recommendations, and there aren't that many foods that are really good sources; thus, it may take special care to ensure an adequate intake. Many doctors recommend feeding a fortified milk formula or breakfast cereal or giving an iron supplement to infants and toddlers, because it is especially difficult to meet their iron needs. Doctors usually prescribe iron supplements for pregnant or lactating women. The list of foods will help you select

those that are good sources of iron as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Iron

Iron is lost in cooking some foods even under the best conditions. To retain iron:

- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.

## What About Enriched or Fortified Foods?

Pasta, white rice, and most breads made from refined flours are enriched with iron, because iron is one of the nutrients lost in processing. Other nutrients added to refined flours and pasta are thiamin, niacin, and riboflavin. Enriched products or products made from enriched flour are labeled as such. Minimum and maximum enrichment levels are specified for thiamin, riboflavin, and niacin, but only a minimum level of iron is required in farina. Thus, iron enrichment levels for farina vary from brand to brand.

Most ready-to-eat and instant-prepared cereals are fortified with iron. Fortified ready-to-eat cereals usually contain at least 25 percent of the U.S. RDA for iron. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of cooked spinach contains more iron than a 1/2-cup serving of spinach served raw, because the cooked spinach weighs more. Therefore, the cooked spinach appears on the list while the raw form does not. Raw spinach provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Iron?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS<sup>2</sup>

Bagel, plain, pumpernickel, or whole-wheat.....	1 medium.....	+
Farina, regular or quick, cooked.....	2/3 cup.....	++
Muffin, bran.....	1 medium.....	+
Noodles, cooked.....	1 cup.....	+
Oatmeal, instant, fortified, prepared.....	2/3 cup.....	++
Pita bread, plain or whole-wheat.....	1 small.....	+
Pretzel, soft.....	1.....	+
Ready-to-eat cereals, fortified	1 ounce.....	++
Rice, white, regular or converted, cooked.....	2/3 cup.....	+

## FRUITS

Apricots, dried, cooked, unsweetened.....	1/2 cup.....	+
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## VEGETABLES

Beans, lima, cooked.....	1/2 cup.....	+
Spinach, cooked.....	1/2 cup.....	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

Beef:		
Brisket, braised, lean only.....	3 ounces.....	+
Ground; extra lean, lean, or regular; baked or broiled.....	1 patty.....	+
Pot roast, braised, lean only.....	3 ounces.....	+
Roast, rib, roasted, lean only.....	3 ounces.....	+
Shortribs, braised, lean only.....	3 ounces.....	+
Steak; baked, broiled, or braised; lean only..	3 ounces.....	+
Stew meat, simmered, lean only.....	3 ounces.....	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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Liver, braised:		
Beef.....	3 ounces.....	++
Calf.....	3 ounces.....	+
Pork.....	3 ounces.....	+++
Chicken or turkey.....	1/2 cup diced.....	++
Liverwurst.....	1 ounce.....	+
Tongue, braised.....	3 ounces.....	+
Turkey, dark meat, roasted, without skin.....	3 ounces.....	+

### Fish and Seafood

Clams; steamed, boiled, or canned; drained.....		
3 ounces.....	++	+
Mackerel, canned, drained	3 ounces.....	+
Mussels, steamed, boiled, or poached.....	3 ounces.....	+
Oysters:		
Baked, broiled, or steamed.....	3 ounces.....	++
Canned, undrained.....	3 ounces.....	++
Shrimp; broiled, steamed, boiled, or canned;		
drained.....	3 ounces.....	+
Trout, baked or broiled....	3 ounces.....	+

### Dry Beans, Peas, and Lentils

Beans; black-eyed peas (cowpeas), chickpeas (garbanzo beans), red kidney, or white; cooked.		
1/2 cup.....	+	
Lentils, cooked.....	1/2 cup.....	+
Soybeans, cooked.....	1/2 cup.....	++

### Nuts and Seeds

Pine nuts (pignolias).....	2 tablespoons.....	+
Pumpkin or squash seeds, hulled, roasted.....	2 tablespoons.....	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>Breads, pasta, and cereals listed are enriched unless otherwise noted. See section on enriched or fortified foods.



# MAGNESIUM

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

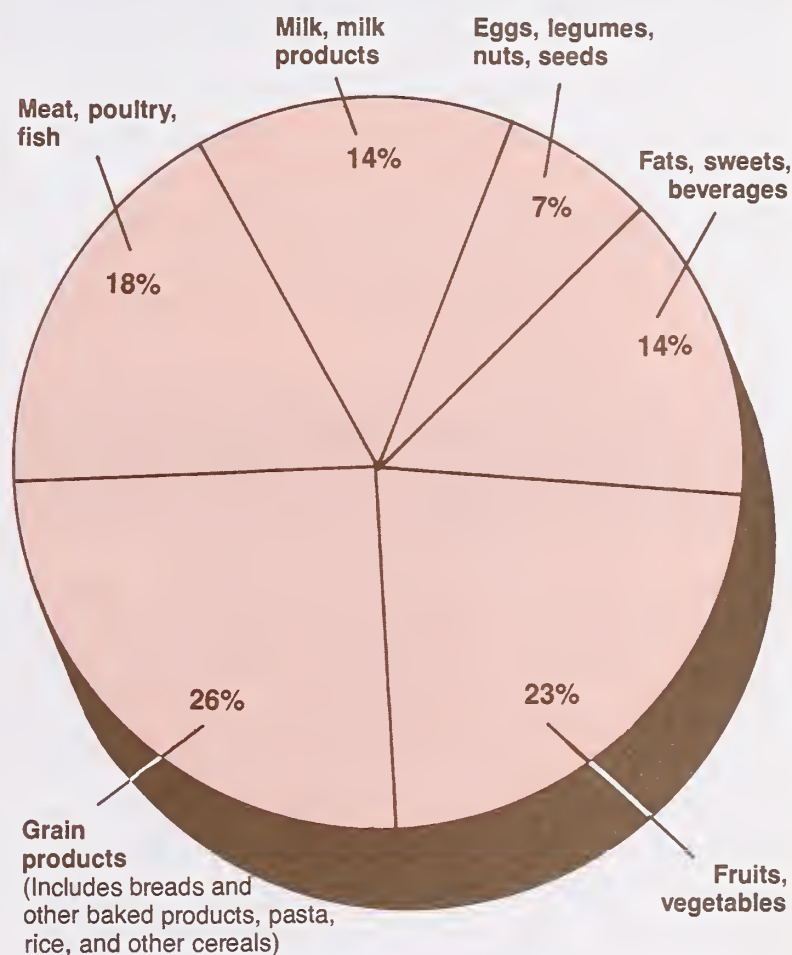
## What Is Meant By a Good Food Source?

A good food source of magnesium contains a substantial amount of magnesium in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Dietary Allowance (U.S. RDA) for magnesium in a selected serving size. The U.S. RDA for magnesium is 400 milligrams per day.<sup>1</sup>

The U.S. RDA for magnesium is the amount of the mineral used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 280 milligrams per day for women 19 to 50 years of age and 350 milligrams for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Magnesium?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, about 25 percent of the magnesium in diets of women was supplied by grain products and another 25 percent by fruits and vegetables. Meat, poultry, and fish provided about 18 percent of the magnesium. Fats, sweets, and beverages supply 14 percent of the magnesium; however, they are not considered in our list of "good sources" because they are high in calories compared to the amounts of vitamins and minerals they provide. Foods that con-

tain small amounts of magnesium but are not considered good sources can contribute significant amounts of magnesium to an individual's diet if these foods are eaten often or in large amounts.

### **Why Do We Need Magnesium?**

Magnesium, a mineral, is used in building bones, manufacturing proteins, releasing energy from muscle storage, and regulating body temperature.

### **Do We Get Enough Magnesium?**

According to recent USDA surveys, the average intake of magnesium by women 19 to 50 years of age was about 74 percent of the RDA. Men of the same age got about 94 percent of the recommended amount. About 50 percent of women had intakes below 70 percent of their RDA.

### **How Can We Get Enough Magnesium?**

Eating a variety of foods that contain magnesium is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. Intakes of magnesium tend to be low in relation to recommendations, and there aren't that many foods that are really good sources; thus, it may take special care to ensure an adequate intake. The list of foods will help you select those that are good sources of magnesium as you follow the Dietary

Guidelines. The list of good sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

### **How To Prepare Foods To Retain Magnesium**

Magnesium is lost in cooking some foods even under the best conditions. To retain magnesium:

- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.

### **What About Whole-Grain Cereals?**

Whole-grain ready-to-eat cereals usually contain 10 percent of the U.S. RDA for magnesium. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

### **What Is a Serving?**

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of a cooked vegetable contains more magnesium than 1/2 cup of the same vegetable served raw, because a serving of the cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Magnesium?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

Bread, whole-wheat	2 slices	+
English muffin, whole-wheat	1	+
Muffin, bran	1 medium	+
Multigrain cereal, cooked	2/3 cup	+
Noodles, whole-wheat, cooked	1 cup	+
Pita bread, whole-wheat	1 small	+
Ready-to-eat cereals, whole-grain <sup>2</sup>	1 ounce	+
Rice, brown, cooked	2/3 cup	+
Spaghetti, high-protein, cooked	1 cup	+
Wheat germ, plain	2 tablespoons	+

## VEGETABLES

Artichoke, globe (french), cooked	1 medium	+
Beans, lima, cooked	1/2 cup	+
Broccoli, cooked	1/2 cup	+
Chard, cooked	1/2 cup	+
Okra, cooked	1/2 cup	+
Plantain, green or ripe, boiled	1 medium	+
Spinach, cooked	1/2 cup	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Fish and Seafood

Croaker, mackerel, or sea bass; baked or broiled	3 ounces	+
Oysters:		
Baked, broiled, or steamed	3 ounces	+
Canned, undrained	3 ounces	+
Scallops, baked, broiled, boiled, or steamed	3 ounces	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## Dry Beans, Peas, and Lentils

Beans; black-eyed peas (cowpeas), chickpeas (garbanzo beans), soybeans, or white; cooked	1/2 cup	+
Soy milk (not baby formula)	1 cup	+
Tofu (bean curd) <sup>3</sup>	1/2 cup cubed	+

## Nuts and Seeds

Almonds; roasted, dry-roasted, or unroasted	2 tablespoons	+
Brazil nuts, filberts (hazelnuts), or pine nuts (pignolias)	2 tablespoons	+
Cashews, roasted or dry-roasted	2 tablespoons	+
Mixed nuts, roasted	2 tablespoons	+
Peanut butter	2 tablespoons	+
Pumpkin or squash seeds, hulled, unroasted	2 tablespoons	+
Sesame seeds	2 tablespoons	+
Sunflower seeds, hulled, unroasted	2 tablespoons	+

## MILK, CHEESE, AND YOGURT

Milk, chocolate, made with skim milk	1 cup	+
Yogurt, plain, made with nonfat milk	8 ounces	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on whole-grain cereals.

<sup>3</sup>If made with magnesium chloride or nigeri (a coagulant derived from seawater).



# COPPER

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

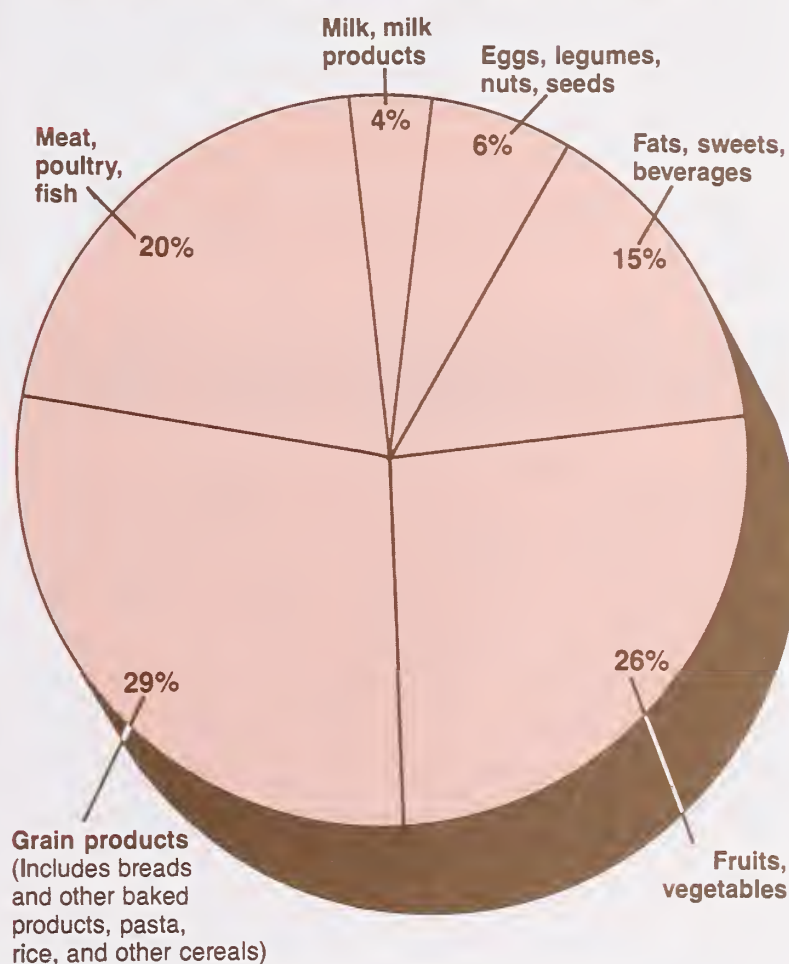
## What Is Meant By a Good Food Source?

A good food source of copper contains a substantial amount of copper in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Dietary Allowance (U.S. RDA) for copper in a selected serving size. The U.S. RDA for copper is 2 milligrams per day.<sup>1</sup>

The U.S. RDA for copper is the amount of the mineral used as a standard in nutrition labeling of foods. This allowance is based on the 1968 estimate of need made by the Food and Nutrition Board of the National Academy of Sciences. The 1989 range of Estimated Safe and Adequate Intakes for adults is 1.5 to 3 milligrams per day.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Copper?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, 29 percent of the copper in the diets of women was supplied by grain products and 26 percent was furnished by fruits and vegetables. Of the fruits and vegetables, white potatoes provided more copper than any of the other types. Foods that contain small amounts of copper but are not considered good sources can contribute significant amounts of copper to an individual's diet if these foods are eaten often or in large amounts.

## Why Do We Need Copper?

Copper, a mineral, is necessary (along with iron) for the formation of hemoglobin. It also helps keep bones, blood vessels, and nerves healthy.

## Do We Get Enough Copper?

According to recent USDA surveys, the average intake of copper by women 19 to 50 years of age was about 1 milligram, and that of men of the same age was about 1.6 milligrams. For women, this amount is less than the 1.5- to 3-milligram range of Estimated Safe and Adequate Daily Dietary Intakes recommended by the Food and Nutrition Board of the National Academy of Sciences.

## How Can We Get Enough Copper?

Eating a variety of foods that contain copper is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. Intakes of copper tend to be low in relation to recommendations, and there aren't that many foods that are really good sources; thus, it may take special care to ensure an adequate intake. The list of foods will help you select those

that are good sources of copper as you follow the Dietary Guidelines. The list of good sources was derived from the nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## How To Prepare Foods To Retain Copper

Copper is lost in cooking some foods even under the best conditions. To retain copper:

- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.

## What Is a Serving?

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of cooked mushrooms contains more copper than 1/2 cup of mushrooms served raw, because a serving of cooked mushrooms weighs more. Therefore, cooked mushrooms appear on the list while the raw form does not. Raw mushrooms provide the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Copper?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

Barley, cooked	2/3 cup	++
English muffin, whole-wheat	1	+
Muffin, bran	1 medium	+
Pita bread, whole-wheat	1 small	+

## FRUITS

Prunes, dried, cooked, unsweetened	1/2 cup	+
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## VEGETABLES

Beans, lima, cooked	1/2 cup	+
Mushrooms, cooked	1/2 cup	+
Potato, baked or boiled, with skin	1 medium	+
Sweetpotato, baked or boiled	1 medium	+
Tomato juice cocktail	3/4 cup	+
Turnip greens, cooked	1/2 cup	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

Liver, braised:		
Beef or calf	3 ounces	++
Chicken or turkey	1/2 cup diced	+

### Fish and Seafood

Clams; steamed, boiled, or canned; drained	3 ounces	+
Crabmeat, steamed	3 ounces	++
Lobster, steamed or boiled	3 ounces	+++

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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### Oysters:

Baked, broiled, or steamed	3 ounces	+++
Canned, undrained	3 ounces	+++
Shrimp; broiled, steamed, boiled, or canned; drained	3 ounces	+

### Dry Beans, Peas, and Lentils

Beans, black-eyed peas (cowpeas) or soybeans, cooked	1/2 cup	+
Lentils, cooked	1/2 cup	+

### Nuts and Seeds

Almonds or cashews, roasted or dry-roasted	2 tablespoons	+
Brazil nuts, english walnuts, filberts (hazelnuts), pine nuts (pignolias)	2 tablespoons	+
Mixed nuts, dry-roasted	2 tablespoons	+
Peanuts, roasted	2 tablespoons	+
Pistachio nuts, unroasted	2 tablespoons	+
Pumpkin or squash seeds, hulled, roasted	2 tablespoons	+
Sesame seeds	2 tablespoons	+
Sunflower seeds, hulled; roasted, dry-roasted, or unroasted	2 tablespoons	+

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age



# ZINC

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

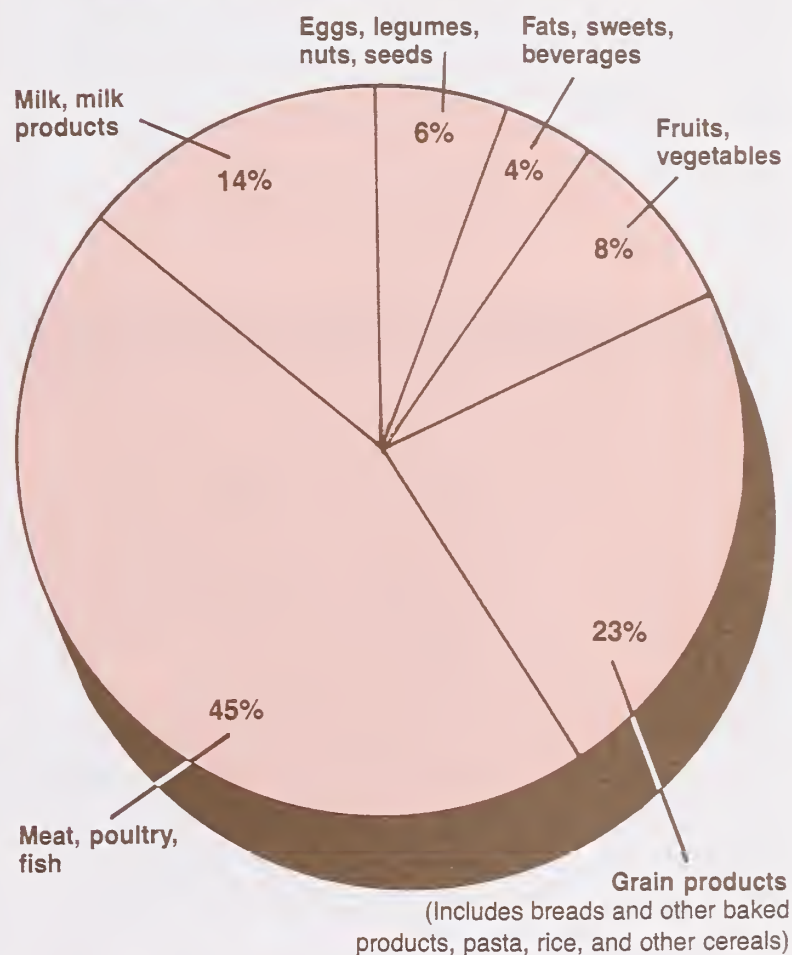
## What Is Meant By a Good Food Source?

A good food source of zinc contains a substantial amount of zinc in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Dietary Allowance (U.S. RDA) for zinc in a selected serving size. The U.S. RDA for zinc is 15 milligrams per day.<sup>1</sup>

The U.S. RDA for zinc is the amount of the mineral used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 12 milligrams per day for women 19 to 50 years of age and 15 milligrams for men 19 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Zinc?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, almost one-half of the zinc in the diets of women was supplied by meat, poultry, and fish. Grain products were also good food sources of zinc; they contributed almost 25 percent. Foods that contain small amounts of zinc but are not considered good sources can contribute significant amounts of zinc to an individual's diet if these foods are eaten often or in large amounts.

## **Why Do We Need Zinc?**

Zinc, a mineral, plays an important role in the formation of protein in the body and thus assists in wound healing, blood formation, and general growth and maintenance of all tissues. Zinc is a component of many enzymes and thus is involved in most metabolic processes.

## **Do We Get Enough Zinc?**

According to recent USDA surveys, the average intake of zinc by women 19 to 50 years of age was less than 75 percent of their RDA while that of men of the same age averaged about 95 percent of their RDA. Over one-half of women had intakes less than 70 percent of the RDA.

## **How Can We Get Enough Zinc?**

Eating a variety of foods that contain zinc is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. Intakes of zinc tend to be low in relation to recommendations, and there aren't many foods that are really good sources; thus, it may take special care to ensure an adequate intake. The list of foods will help you select those that are good sources of zinc as you follow the Dietary Guidelines. The list of good sources was derived from the same nutritive value of

foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## **How To Prepare Foods To Retain Zinc**

Zinc is lost in cooking some foods even under the best cooking conditions. To retain zinc:

- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.

## **What About Fortified Foods?**

Most fortified ready-to-eat cereals usually contain at least 10 percent of the U.S. RDA for zinc. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

## **What Is a Serving?**

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, the edible part of a cooked chicken leg (thigh and drumstick) weighs more than the edible part of a cooked chicken breast half. Therefore, the chicken leg appears on the list while the chicken breast half does not. The chicken breast half provides the nutrient—but just not enough to be considered a good source.

# What Are Good Sources Of Zinc?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

Ready-to-eat cereals, fortified <sup>2</sup>	1 ounce.....	+
Wheat germ, plain .....	2 tablespoons .....	+

## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

#### Beef:

Brisket, braised, lean only .....	3 ounces .....	++
Ground; extra lean, lean, or regular; baked or broiled .....	1 patty .....	++
Pot roast, braised, lean only .....	3 ounces .....	+++
Roast, rib, roasted, lean only .....	3 ounces .....	++
Shortribs, braised, lean only .....	3 ounces .....	+++
Steak, lean only:		
Baked or broiled .....	3 ounces .....	++
Braised .....	3 ounces .....	+++
Stew meat, simmered, lean only .....	3 ounces .....	+++

Chicken, leg (thigh and drumstick), broiled or roasted, without skin ....	1 leg .....	+
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Ham, fresh, smoked or cured, roasted, lean only	3 ounces .....	+
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#### Lamb:

Chop, shoulder; braised, broiled, or baked; lean only .....	1 chop .....	++
Ground, cooked .....	1 patty .....	+
Roast, shoulder, roasted, lean only .....	3 ounces .....	++

#### Liver, braised:

Beef or pork .....	3 ounces .....	++
Calf .....	3 ounces .....	+++
Chicken or turkey .....	1/2 cup diced .....	+

#### Pork:

Chop, baked or broiled, lean only .....	1 chop .....	+
Ground, cooked .....	3 ounces .....	+
Roast, loin, roasted, lean only .....	3 ounces .....	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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### Pork (continued):

Roast, shoulder, roasted, lean only .....	3 ounces .....	+
Tongue, braised .....	3 ounces .....	++

### Turkey:

Ground, cooked .....	3 ounces .....	+
Light or dark meat, roasted, without skin ..	3 ounces .....	+

### Veal:

Chop, braised, lean only .	1 chop .....	+
Ground, cooked .....	1 patty .....	+
Roast, leg, roasted, lean only .....	3 ounces .....	++

### Fish and Seafood

Carp, baked or broiled ....	3 ounces .....	+
Crabmeat, steamed .....	3 ounces .....	+
Lobster, steamed or boiled	3 ounces .....	+
Mussels, steamed, boiled, or poached .....	3 ounces .....	+
Oysters:		
Baked, broiled, or steamed .....	3 ounces .....	+++
Canned, undrained .....	3 ounces .....	+++

### Nuts and Seeds

Pumpkin or squash seeds, hulled, roasted .....	2 tablespoons .....	+
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## MILK, CHEESE, AND YOGURT

Cheese, ricotta .....	1/2 cup .....	+
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### Yogurt:

Flavored, made with whole or lowfat milk .....	8 ounces .....	+
Plain, made with lowfat or nonfat milk .....	8 ounces .....	+

<sup>1</sup>A selected serving size contains—

+      10-24 percent of the U.S. RDA for adults and children over 4 years of age  
 ++     25-39 percent of the U.S. RDA for adults and children over 4 years of age  
 +++    40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on fortified cereals.



# PHOSPHORUS

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

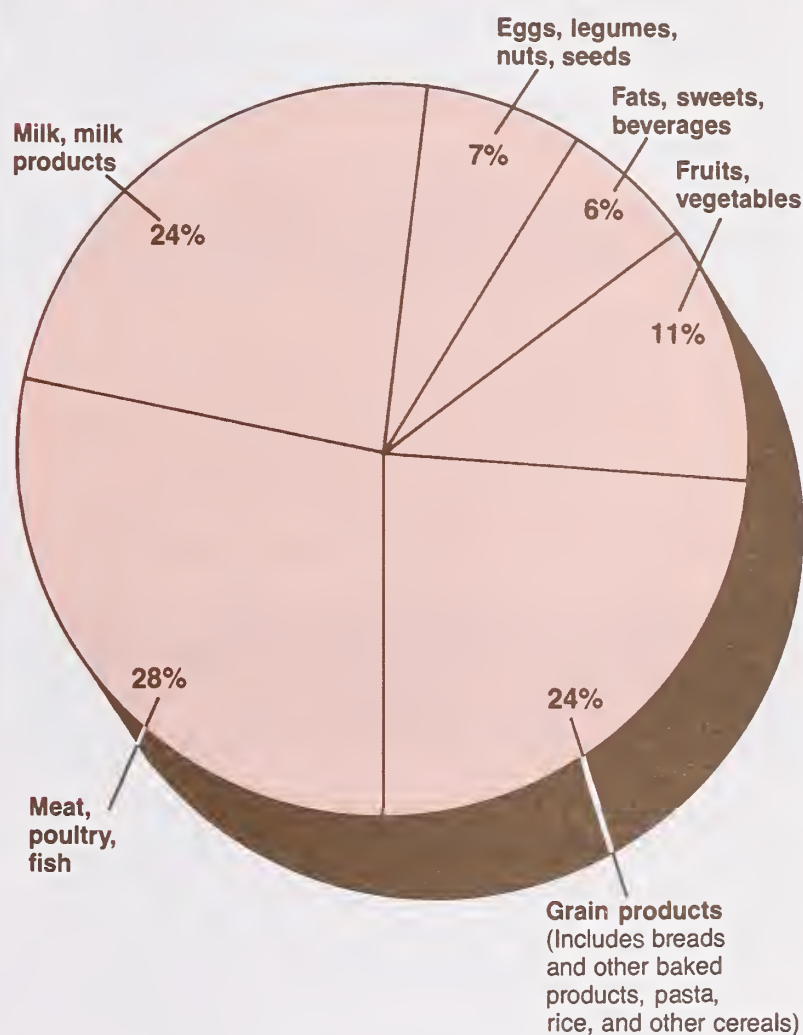
## What Is Meant By a Good Food Source?

A good food source of phosphorus contains a substantial amount of phosphorus in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Dietary Allowance (U.S. RDA) for phosphorus in a selected serving size. The U.S. RDA for phosphorus is 1,000 milligrams per day.<sup>1</sup>

The U.S. RDA for phosphorus is the amount of the mineral used as a standard in nutrition labeling of foods. This allowance is based on the 1968 Recommended Dietary Allowances (RDA) for 24 sex-age categories set by the Food and Nutrition Board of the National Academy of Sciences. The 1989 RDA has been set at 1,200 milligrams per day for women and men 19 to 24 years of age and 800 milligrams for women and men 25 to 50 years of age.

<sup>1</sup>The U.S. RDA given is for adults (except pregnant or lactating women) and children over 4 years of age.

## Where Do Women Get Phosphorus?<sup>1</sup>



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986 Continuing Survey of Food Intakes by Individuals, 4 days.

<sup>1</sup>Women 19-50 years of age.

As you can see, in 1985 and 1986, 28 percent of the phosphorus in the diets of women was supplied by meat, poultry, and fish. Grain products and milk and milk products each contributed 24 percent of the phosphorus. Much of the phosphorus provided by the fats, sweets, and beverages group comes from carbonated beverages; however, they are not considered in our list of "good sources" because they are high in calories compared to

the amounts of vitamins and minerals they provide. These beverages often contain phosphorus in the form of phosphates. Foods that contain small amounts of phosphorus but are not considered good sources can contribute significant amounts of phosphorus to an individual's diet if these foods are eaten often or in large amounts.

### **Why Do We Need Phosphorus?**

Phosphorus, a mineral, helps build strong bones and teeth. Phosphorus is also involved in the release of energy from fat, protein, and carbohydrates during metabolism, and in the formation of genetic material, cell membranes, and many enzymes.

### **Do We Get Enough Phosphorus?**

According to recent USDA surveys, the intake of phosphorus by women 35 to 50 years of age and men 19 to 50 years of age averaged above their RDA. Average phosphorus intake by women 19 to 34 years of age was about 1,000 milligrams per day.

### **How Can We Get Enough Phosphorus?**

Eating a variety of foods that contain phosphorus is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are good sources of phosphorus as you follow the Dietary Guidelines. The list of good sources

was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

### **How To Prepare Foods To Retain Phosphorus**

Phosphorus is lost in cooking some foods even under the best conditions. To retain phosphorus:

- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.
- Roast or broil lamb, veal, pork, and poultry. (Beef keeps the same amount of phosphorus regardless of cooking method.)

### **What About Whole-Grain Cereals?**

Whole-grain ready-to-eat cereals usually contain 10 percent of the U.S. RDA for phosphorus. Since cereals vary, check the label on the package for the percentage of the U.S. RDA for a specific cereal.

### **What Is a Serving?**

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amounts eaten of some meats may be easier to estimate by the piece rather than by weight. For example, the selected serving size for lamb is 1 chop weighing 3-1/4 ounces, 1 patty weighing 2-3/4 ounces, or 3 ounces of roast shoulder.

# What Are Good Sources of Phosphorus?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

Bread, whole-wheat	2 slices	+
Bulgur, cooked or canned	2/3 cup	+
Muffin, whole-wheat	1 medium	+
Oatmeal, regular or quick, cooked	2/3 cup	+
Pancakes, plain	2 4-inch pancakes	+
Ready-to-eat cereals, whole-grain <sup>2</sup>	1 ounce	+
Roll, whole-wheat	1 medium	+
Waffles, plain	2 4-inch squares	++
Wheat germ, plain	2 tablespoons	+

## VEGETABLES

Beans, lima, cooked	1/2 cup	+
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## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

#### Beef:

Brisket, braised, lean only	3 ounces	+
Ground; extra lean, lean, or regular; baked or broiled	1 patty	+
Pot roast, braised, lean only	3 ounces	+
Roast, rib, roasted, lean only	3 ounces	+
Shortribs, braised, lean only	3 ounces	+
Steak; baked, braised, or broiled; lean only	3 ounces	+
Stew meat, simmered, lean only	3 ounces	+
Chicken, without skin:		
Breast, broiled or roasted	1/2 breast	+
Leg (thigh and drumstick), broiled or roasted	1 leg	+
Ham, roasted, lean only:		
Fresh	3 ounces	+
Smoked or cured	3 ounces	+
Lamb:		
Chop, loin or shoulder; baked, braised, or broiled; lean only	1 chop	+
Ground, cooked	1 patty	+
Roast, shoulder, roasted, lean only	3 ounces	+
Liver, braised:		
Beef or calf	3 ounces	++
Chicken	1/2 cup diced	+
Pork:		
Chop, baked or broiled, lean only	1 chop	+

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
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### Pork (continued):

Ground, cooked	3 ounces	+
Roast, roasted, lean only:		
Loin	3 ounces	+
Shoulder	3 ounces	+
Steak or cutlet, baked or broiled, lean only	3 ounces	+

### Turkey:

Ground, cooked	3 ounces	+
Light or dark meat, roasted, without skin	3 ounces	+

### Veal:

Cutlet or steak, pan-broiled, lean only	3 ounces	+
Ground, cooked	1 patty	+
Roast, leg, roasted, lean only	3 ounces	+

### Fish and Seafood

Carp, baked or broiled	3 ounces	+++
Catfish, cod, croaker, mackerel, mullet, ocean perch, pike, pompano, porgy, trout, or whiting; baked or broiled	3 ounces	+
Clams; steamed, boiled, or canned; drained	3 ounces	+
Crabmeat, steamed	3 ounces	+
Flounder, haddock, perch, or sea bass; baked or broiled	3 ounces	+
Lobster, steamed or boiled	3 ounces	+
Mackerel, canned, drained	3 ounces	++
Mussels, steamed, boiled, or poached	3 ounces	+
Oysters:		
Baked, broiled, or steamed	3 ounces	+
Canned, undrained	3 ounces	+
Salmon:		
Baked, broiled, steamed, or poached	3 ounces	+
Canned, drained	3 ounces	++
Scallops:		
Baked or broiled	3 ounces	+
Boiled or steamed	3 ounces	+
Shrimp:		
Broiled	3 ounces	+
Steamed, boiled, or canned, drained	3 ounces	+
Swordfish steak, baked or broiled	3 ounces	++
Tuna, canned, drained	3 ounces	+

Continued

# What Are Good Sources of Phosphorus?

Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
<b>Dry Beans, Peas, and Lentils</b>		
Beans; calico, chickpeas (garbanzo beans), lima, mexican, mung, pinto, or red kidney; cooked	1/2 cup	+
Lentils, cooked	1/2 cup	+
Soy milk (not baby formula)	1 cup	+

<b>Nuts and Seeds</b>		
Almonds, roasted	2 tablespoons	+
Brazil nuts	2 tablespoons	+
Peanut butter	2 tablespoons	+
Pine nuts (pignolias)	2 tablespoons	+
Sesame seeds	2 tablespoons	+
Sunflower seeds, hulled; roasted, unroasted, or dry-roasted	2 tablespoons	+

## MILK, CHEESE, AND YOGURT

Cheese, natural: blue, brick, cheddar, colby, edam, gouda, gruyere, havarti, limburger, monterey, mozzarella, muenster, parmesan (hard), port du salut, provolone, roquefort, swiss, tilsit	1 ounce	+
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Food	Selected Serving Size	Percentage of U.S. RDA <sup>1</sup>
Cheese, process, cheddar or swiss		
	3/4 ounce	+
Cheese, ricotta	1/2 cup	+
Cheese spread, cheddar	1 tablespoon	+
Cottage cheese, regular or lowfat		
	1/2 cup	+
Ice milk, soft-serve	1/2 cup	+
Milk:		
Chocolate	1 cup	++
Dry, lowfat, or nonfat; reconstituted		
	1 cup	+
Evaporated, diluted:		
Skim	1 cup	+
Whole	1 cup	++
Whole, lowfat, or skim	1 cup	+
Yogurt:		
Flavored or fruit, made with whole or lowfat milk		
	8 ounces	++
Frozen	8 ounces	+
Plain:		
Made with whole milk		
	8 ounces	+
Made with lowfat or nonfat milk		
	8 ounces	++

<sup>1</sup>A selected serving size contains—

+	10-24 percent of the U.S. RDA for adults and children over 4 years of age
++	25-39 percent of the U.S. RDA for adults and children over 4 years of age
+++	40 percent or more of the U.S. RDA for adults and children over 4 years of age

<sup>2</sup>See section on whole-grain cereals.

# DIETARY FIBER

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

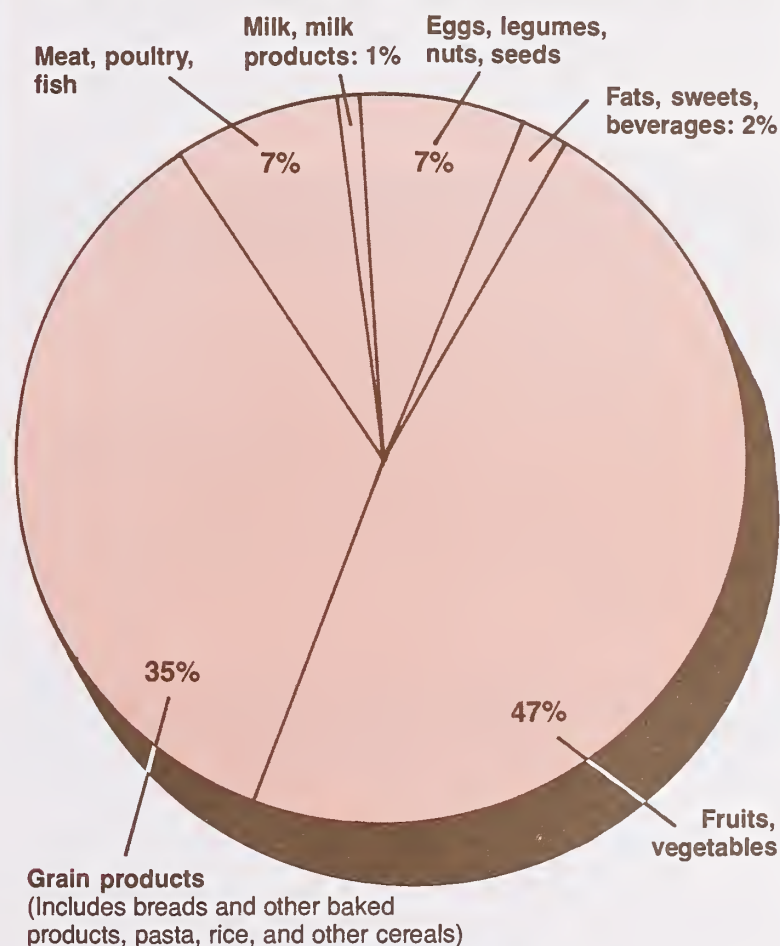
## What Is Meant By a Food Source Of Dietary Fiber?

In this fact sheet, a significant source of dietary fiber is defined as a food that contains a substantial amount of dietary fiber in relation to its calorie content and contributes at least 2 grams of dietary fiber in a selected serving size.

The Food and Nutrition Board of the National Academy of Sciences has not set a Recommended Dietary Allowance (RDA) for dietary fiber. However, the importance of dietary fiber has been stressed by several health organizations and the Federal Government. The Dietary Guidelines for Americans published jointly by the U.S. Departments of Agriculture and Health and Human Services recommend eating foods that have adequate amounts of fiber, and one organization, the National Cancer Institute, recommends 20 to 30 grams of fiber per day with an upper limit

of 35 grams. For this list of fiber sources, the Human Nutrition Information Service, along with the Food and Drug Administration, decided to use a level of at least 2 grams of dietary fiber per serving.

## Where Do Women Get Dietary Fiber?



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

\*Women 19-50 years of age. The percentages provided by the various food groups may not add up to 100 because of rounding.

As you can see, in 1985 and 1986, almost one-half of dietary fiber in the diets of women was supplied by fruits and vegetables and another 35 percent by grain products. Dietary fiber is not found in animal products,

such as milk and meats. The fiber shown in the chart as coming from these groups was contributed by grain products or vegetables added to them. Even foods that contain small amounts of dietary fiber can make an important contribution to an individual's diet if these foods are eaten often or in large amounts.

## **What Is Dietary Fiber?**

Dietary fiber is a complex mixture of plant materials that are resistant to breakdown (digestion) by the human digestive system. There are two major kinds of dietary fiber—insoluble (cellulose, hemicellulose, lignin) and soluble (gums, mucilages, pectins). Insoluble fiber is most frequently found in whole-grain products such as whole-wheat bread. Foods containing soluble fibers are fruits, vegetables, dry beans and peas, and some cereals such as oats.

## **Why Do We Need Dietary Fiber?**

Insoluble fiber promotes normal elimination by providing bulk for stool formation and thus hastening the passage of the stool through the colon. Insoluble fiber also helps to satisfy appetite by creating a full feeling. Some studies indicate that soluble fibers may play a role in reducing the level of cholesterol in the blood.

## **How Much Dietary Fiber Do Americans Eat?**

According to recent USDA surveys, the average intake of dietary fiber by women 19 to 50 years of age is about 12 grams. Intake by men of the same age is about 17 grams.

## **How Can We Get Enough Dietary Fiber?**

Eating a variety of foods that contain dietary fiber is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods will help you select those that are significant sources of dietary fiber as you follow the Dietary Guidelines. The list of sources was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## **How To Prepare Foods To Retain Dietary Fiber**

Dietary fiber can be reduced in foods during preparation and cooking. To retain dietary fiber:

- Serve fruits and vegetables with edible skins and seeds.
- Use whole-grain flours.

## **What Is a Serving?**

The serving sizes used on the list of sources of dietary fiber are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of a cooked vegetable contains more fiber than 1/2 cup of the same vegetable served raw, because a serving of cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides dietary fiber—but just not enough in a 1/2-cup serving to be a significant source of dietary fiber.

# What Are Sources Of Dietary Fiber?

Food	Selected Serving Size <sup>1</sup>
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

Bagel, whole-wheat	1 medium
Biscuit, whole-wheat	1 medium
Breads, multigrain, pumpemickel, rye, white and whole-wheat blend, whole-wheat, or whole-wheat with raisins	2 regular slices
Bulgur, cooked or canned	$\frac{2}{3}$ cup
English muffin, whole-wheat	1
Muffins, bran or whole-wheat	1 medium
Oatmeal:	
Instant, fortified, prepared	$\frac{2}{3}$ cup
Regular or quick, cooked	$\frac{2}{3}$ cup
Pita bread, whole-wheat	1 small
Ready-to-eat bran cereals	1 ounce
Rolls:	
Multigrain	1 large
Whole-wheat	1 medium

## FRUITS

Apples:	
Dried, cooked, unsweetened	$\frac{1}{2}$ cup
Raw	1 medium
Applesauce, unsweetened	$\frac{1}{2}$ cup
Apricots, dried:	
Cooked, unsweetened	$\frac{1}{2}$ cup
Uncooked	$\frac{1}{4}$ cup
Banana, raw	1 medium
Blackberries, raw or frozen, unsweetened	$\frac{1}{2}$ cup
Blueberries, frozen, unsweetened	$\frac{1}{2}$ cup
Dates, chopped	$\frac{1}{4}$ cup
Fruit mixture, dried	$\frac{1}{4}$ cup
Guava, raw	1
Kiwifruit, raw	1 medium
Mango, raw	$\frac{1}{2}$ medium
Nectarine, raw	1 medium
Orange, raw	1 medium
Peaches, dried:	
Cooked, unsweetened	$\frac{1}{2}$ cup
Uncooked	$\frac{1}{4}$ cup
Pears:	
Canned, juice-pack	$\frac{1}{2}$ cup
Dried, cooked, unsweetened	$\frac{1}{2}$ cup
Dried, uncooked	$\frac{1}{4}$ cup
Raw	1 medium

Food	Selected Serving Size <sup>1</sup>
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Prunes, dried:	
Cooked, unsweetened	$\frac{1}{2}$ cup
Uncooked	$\frac{1}{4}$ cup
Raisins	$\frac{1}{4}$ cup
Raspberries, raw or frozen, unsweetened	$\frac{1}{2}$ cup
Strawberries, frozen, unsweetened	$\frac{1}{2}$ cup
Tangelo, raw	1 medium

## VEGETABLES

Artichoke, globe (french), cooked	1 medium
Beans, green or lima, cooked	$\frac{1}{2}$ cup
Beets, cooked	$\frac{1}{2}$ cup
Broccoli, cooked	$\frac{1}{2}$ cup
Brussels sprouts, cooked	$\frac{1}{2}$ cup
Cabbage, cooked	$\frac{1}{2}$ cup
Carrots, cooked	$\frac{1}{2}$ cup
Okra, cooked	$\frac{1}{2}$ cup
Parsnips, cooked	$\frac{1}{2}$ cup
Peas, green, cooked	$\frac{1}{2}$ cup
Potato, boiled, with skin	1 medium
Snow peas, raw or cooked	$\frac{1}{2}$ cup
Spinach, cooked	$\frac{1}{2}$ cup
Squash, winter, cooked, mashed	$\frac{1}{2}$ cup
Sweetpotato, baked or boiled	1 medium
Tomatoes, stewed	$\frac{1}{2}$ cup

## MEAT, POULTRY, FISH, AND ALTERNATES

### Dry Beans, Peas, and Lentils

Beans; black-eyed peas (cowpeas), calico, chickpeas (garbanzo beans), lima, mexican, pinto, red kidney, or white; cooked	$\frac{1}{2}$ cup
Lentils, cooked	$\frac{1}{2}$ cup
Peas, split, green or yellow, cooked	$\frac{1}{2}$ cup

### Nuts and Seeds

Almonds or chestnuts, roasted	2 tablespoons
Peanut butter	2 tablespoons
Pine nuts (pignolias)	2 tablespoons
Pumpkin or squash seeds, hulled, roasted	2 tablespoons
Sesame seeds	2 tablespoons
Sunflower seeds, hulled, unroasted	2 tablespoons

<sup>1</sup>A selected serving size contains at least 2 grams of dietary fiber.



# POTASSIUM

*This is one in a series of fact sheets containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber as you follow the Dietary Guidelines for Americans. The Guidelines are—*

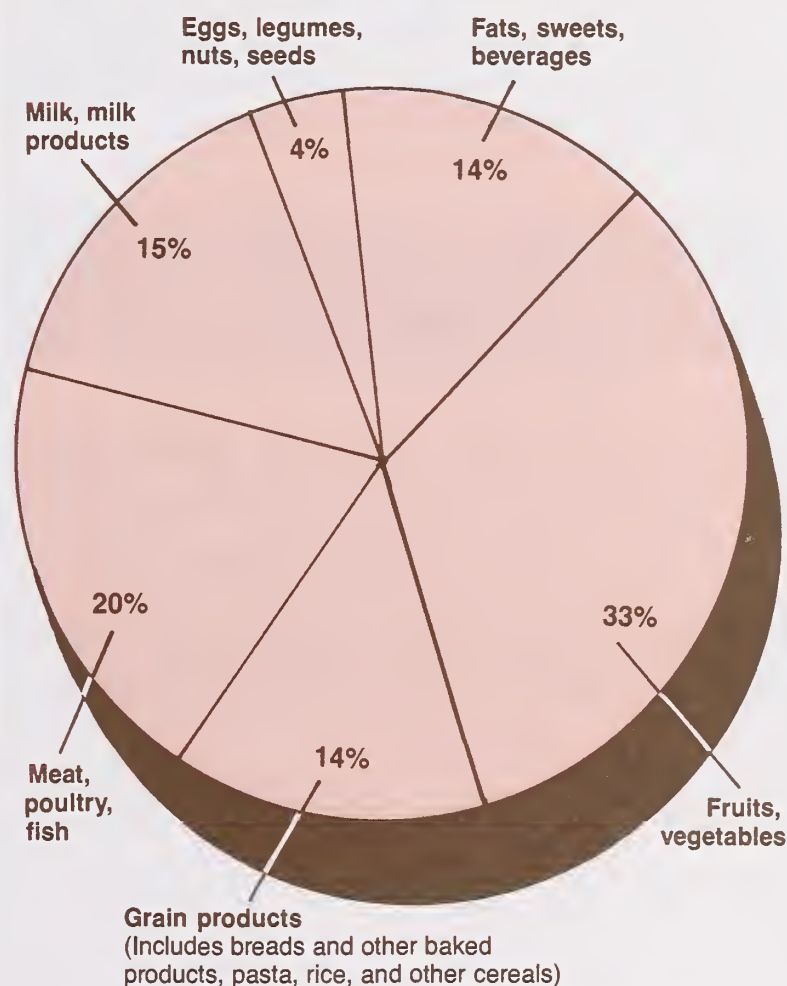
- *Eat a Variety of Foods*
- *Maintain Desirable Weight*
- *Avoid Too Much Fat, Saturated Fat, and Cholesterol*
- *Eat Foods with Adequate Starch and Fiber*
- *Avoid Too Much Sugar*
- *Avoid Too Much Sodium*
- *If You Drink Alcoholic Beverages, Do So in Moderation*

## What Is Meant By a Good Food Source?

A good food source of potassium contains a substantial amount of potassium in relation to its calorie content and contributes at least 200 milligrams of potassium in a selected serving size.

The Food and Nutrition Board of the National Academy of Sciences has estimated the minimum requirement for potassium for men and women over 18 years of age to be 2,000 milligrams per day.

## Where Do Women Get Potassium?¹



Source: U.S. Department of Agriculture, Human Nutrition Information Service. Unpublished data from 1985 and 1986. Continuing Survey of Food Intakes by Individuals, 4 days.

¹Women 19-50 years of age.

As you can see, in 1985 and 1986, one-third of the potassium in the diets of women came from fruits and vegetables. Within this food group, white potatoes provided about one-third of the potassium. Meat, poultry, and fish supplied 20 percent of the potassium. Foods that contain small amounts of potassium but are not considered good sources can contribute significant amounts of potassium to an individual's diet if these foods are eaten often or in large amounts.

## **Why Do We Need Potassium?**

Potassium, a mineral, assists in muscle contraction and in maintaining fluid and electrolyte balance in body cells. Potassium is also important in sending nerve impulses as well as releasing energy from protein, fat, and carbohydrates during metabolism.

## **Do We Get Enough Potassium?**

According to recent USDA surveys, the average intake of potassium by women and men 19 to 50 years of age was above the minimum requirement estimated by the Food and Nutrition Board of the National Academy of Sciences.

## **How Can We Get Enough Potassium?**

Eating a variety of foods that contain potassium is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The list of foods can help you select those that are good sources of potassium as you follow the Dietary Guidelines. The list of good sources

was derived from the same nutritive value of foods tables used to analyze information for recent food consumption surveys of the U.S. Department of Agriculture, Human Nutrition Information Service.

## **How To Prepare Foods To Retain Potassium**

Potassium is lost in cooking some foods even under the best conditions. To retain potassium:

- Cook foods in a minimal amount of water.
- Cook for the shortest possible time.

## **What Is a Serving?**

The serving sizes used on the list of good sources are only estimates of the amounts of food you might eat. The amount of nutrient in a serving depends on the weight of the serving. For example, 1/2 cup of a cooked vegetable contains more nutrients than 1/2 cup of the same vegetable served raw, because a serving of the cooked vegetable weighs more. Therefore, the cooked vegetable may appear on the list while the raw form does not. The raw vegetable provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

# What Are Good Sources Of Potassium?

Food	Selected Serving Size	Potassium Per Serving¹
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## BREADS, CEREALS, AND OTHER GRAIN PRODUCTS

### Ready-to-eat cereals:

Oat flakes, fortified with soy flour .....	1 ounce .....	+
100-percent-bran cereals² ..	1 ounce .....	++

## FRUITS

### Apricots:

Dried, cooked, unsweetened .....	½ cup .....	+++
Dried, uncooked .....	¼ cup .....	++
Banana, raw .....	1 medium .....	++
Cantaloup, raw .....	About ½ cup diced ..	+

### Grapefruit juice:

Canned or reconstituted frozen, unsweetened ....	¾ cup .....	+
Fresh .....	¾ cup .....	+
Honeydew melon, raw .....	About ¾ cup diced ..	+

### Melon balls (cantaloup and honeydew), frozen,

unsweetened .....	½ cup .....	+
Nectarine, raw .....	1 medium .....	+

### Orange juice:

Canned .....	¾ cup .....	+
Fresh or reconstituted frozen, unsweetened ....	¾ cup .....	++

### Peaches:

Dried, cooked, unsweetened .....	½ cup .....	++
Dried, uncooked .....	¼ cup .....	++

### Pears, dried, cooked,

unsweetened .....	½ cup .....	+
Pomegranate, raw .....	1 medium .....	++

### Prunes, dried, cooked,

unsweetened .....	½ cup .....	++
Prune juice, unsweetened ...	½ cup .....	++

### Raisins .....

Watermelon, raw .....	About 1¾ cups diced .....	+
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## VEGETABLES

### Artichoke, globe (french),

cooked .....	1 medium .....	+
Asparagus, cooked .....	½ cup .....	+

### Beans:

Green, cooked .....	½ cup .....	+
Lima, cooked .....	½ cup .....	+++
Cauliflower, cooked .....	½ cup .....	+
Chard, cooked .....	½ cup .....	++
Corn, cooked .....	½ cup .....	+
Jerusalem artichoke, raw ....	½ cup .....	+
Mushrooms, cooked .....	½ cup .....	+
Parsnips, cooked .....	½ cup .....	+
Peas, green, cooked .....	½ cup .....	+
Plantain, green or ripe, boiled	1 medium .....	+++

Food	Selected Serving Size	Potassium Per Serving¹
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### Potato:

Baked or boiled, with skin .	1 medium .....	+++
Baked or boiled, without skin .....	1 medium .....	++

### Pumpkin, cooked .....

½ cup .....	++
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### Rutabaga, cooked .....

½ cup .....	+
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### Spinach, cooked .....

½ cup .....	++
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### Squash, winter, cooked,

mashed .....	½ cup .....	+++
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### Sweetpotato:

Baked .....	1 medium .....	++
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Boiled .....	1 medium .....	+
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### Tomatoes:

Raw .....	1 medium .....	+
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Stewed .....	½ cup .....	++
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Tomato juice, canned .....	¾ cup .....	++
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Tomato-vegetable juice or tomato juice cocktail, canned .....	¾ cup .....	++
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## MEAT, POULTRY, FISH, AND ALTERNATES

### Meat and Poultry

#### Beef:

Brisket, braised, lean only .....	3 ounces .....	+
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Ground; extra lean, lean, or regular; baked or broiled .....	1 patty .....	+
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Pot roast, braised, lean only .....	3 ounces .....	+
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Roast, rib, roasted, lean only .....	3 ounces .....	+
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Shortribs, braised, lean only .....	3 ounces .....	+
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Steak, lean only: Baked or broiled .....	3 ounces .....	+
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Braised .....	3 ounces .....	+
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Stew meat, simmered, lean only .....	3 ounces .....	+
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#### Chicken, without skin:

Breast, broiled or roasted	½ breast .....	+
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Leg (thigh and drumstick), broiled or roasted .....	1 leg .....	+
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Cornish hen, roasted, without skin .....	½ hen .....	+
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Ham, roasted, lean only: Fresh .....	3 ounces .....	+
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Smoked or cured .....	3 ounces .....	+
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#### Lamb, lean only:

Chop, shoulder; baked, braised, or broiled ....	1 chop .....	+
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Roast, leg or shoulder, roasted .....	3 ounces .....	+
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Continued

## What Are Good Sources Of Potassium?

Food	Selected Serving Size	Potassium Per Serving <sup>1</sup>
<b>Pork:</b>		
Chop, baked or broiled, lean only	1 chop	+
Cutlet or steak, baked or broiled, lean only	1 cutlet	++
Ground, cooked	3 ounces	+
<b>Roast, roasted, lean only:</b>		
Loin	3 ounces	+
Shoulder	3 ounces	+
Turkey, light or dark meat, roasted, without skin	3 ounces	+
<b>Veal, lean only:</b>		
Chop, braised	1 chop	+
Cutlet or steak, pan broiled	1 cutlet	++
Roast, leg, roasted	3 ounces	+
<b>Fish and Seafood</b>		
Carp, catfish, flounder, or mullet; baked or broiled	3 ounces	++
Haddock, mackerel, or porgy; baked or broiled	3 ounces	+
<b>Clams:</b>		
Canned, drained	3 ounces	+
Steamed or boiled	3 ounces	+
Cod, croaker, pompano, or trout; baked or broiled	3 ounces	++
Crabmeat, steamed	3 ounces	+
Lobster, steamed or boiled	3 ounces	+
Mussels, steamed, boiled, or poached	3 ounces	+
Ocean perch, perch, pike, sea bass, or whiting; baked or broiled	3 ounces	+
<b>Oysters:</b>		
Canned, undrained	3 ounces	+
Steamed	3 ounces	+
<b>Salmon:</b>		
Baked or broiled	3 ounces	+
Steamed, poached, or canned; drained	3 ounces	+
<b>Scallops:</b>		
Baked or broiled	3 ounces	+
Boiled or steamed	3 ounces	+
Swordfish steak, baked or broiled	3 ounces	+
Tuna, canned, drained	3 ounces	+

Food	Selected Serving Size	Potassium Per Serving <sup>1</sup>
<b>Dry Beans, Peas, and Lentils</b>		
<b>Beans, cooked:</b>		
Bayo, black, brown, or red kidney	1/2 cup	++
<b>Calico, chickpeas (garbanzo beans),</b>		
mung, or pinto	1/2 cup	+
Lima, soybeans, or white	1/2 cup	++
Lentils, cooked	1/2 cup	++
<b>Peas, split, green or yellow, cooked</b>		
	1/2 cup	++
Soy milk (not baby formula)	1 cup	+

### MILK, CHEESE, AND YOGURT

<b>Milk:</b>		
Buttermilk	1 cup	++
<b>Chocolate, made with</b>		
whole or skim milk	1 cup	++
Skim	1 cup	++
Whole or lowfat	1 cup	++
Milk-based fruit drinks	1 cup	+++
<b>Yogurt:</b>		
<b>Flavored, made with lowfat milk</b>		
	8 ounces	++
Frozen	8 ounces	++
<b>Fruit, made with lowfat or nonfat milk</b>		
	8 ounces	++
<b>Plain:</b>		
Made with whole milk	8 ounces	++
Made with lowfat milk	8 ounces	+++

<sup>1</sup>A selected serving size contains at least—

+ 200-349 milligrams  
++ 350-499 milligrams  
+++ 500 or more milligrams

<sup>2</sup>Most 100-percent-bran cereals contain at least 350 milligrams of potassium.

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